# 1976--77 CATALOG

# ACADEMIC CALENDAR, 1976-77

## SUMMER QUARTER, 1976

| | |
|---|---|
| March 31 | Last Day for Receipt of Applications for Foreign Students Applying from out of the Country |
| June 4 | Last Day for Receipt of Applications for Regular Admission to Summer Quarter |
| June 18 | Change Day (Late Registration and Class Schedule Adjustments) |
| June 21 | Classes Begin |
| June 28 | Last Day to Complete Late Registration<br>Last Day of Official Drop and Add Period<br>Last Day to Drop Courses or Withdraw from University Without Incurring a Financial Liability |
| July 5 | Independence Holiday (University Closed) |
| July 6 | Last Day to Pay Fees Without a $25.00 Late Fee |
| July 9 | Last Day to Apply for Summer Quarter Graduation |
| July 19 | Last Day to Pay Fees to Avoid Cancellation of Enrollment |
| August 6 | Last Day to Reinstate Cancelled Enrollments ($25.00 reinstatement fee) |
| August 13 | Last Day to Drop a Course With a Grade of *DR* |
| August 20 | Last Day to Withdraw from University with *WI* Grade |
| August 26 | Classes End |
| August 30 | All Grades Due in Registration Office by 12:00 Noon |

## FALL QUARTER, 1976

| | |
|---|---|
| July 2 | Last Day for Receipt of Applications for Foreign Students Applying from out of the Country |
| September 2 | Last Day for Receipt of Applications for Regular Admission to Fall Quarter |
| September 6 | Labor Day Holiday (University Closed) |
| September 20 | Change Day (Late Registration and Class Schedule Adjustments) |
| September 21 | Classes Begin |
| September 27 | Last Day to Complete Late Registration<br>Last Day of Official Drop and Add Period<br>Last Day to Drop Courses or Withdraw from University Without Incurring a Financial Liability |
| October 4 | Last Day to Pay Fees Without a $25.00 Late Fee |
| October 11 | Last Day to Apply for Fall Quarter Graduation |
| October 18 | Last Day to Pay Fees to Avoid Cancellation of Enrollment |
| November 8 | Last Day to Reinstate Cancelled Enrollments ($25.00 reinstatement fee) |
| November 11 | Veteran's Day (University closed) |
| November 15 | Last Day to Drop a Course With a Grade of *DR* |
| November 22 | Last Day to Withdraw from University |
| November 25-26 | Thanksgiving Holidays (University Closed) |
| December 10 | Classes End |
| December 11 | Official Commencement Exercises |
| December 14 | All Grades Due in Registration Office by 12:00 Noon |
| December 24 | Christmas Holiday (University Closed) |

## WINTER QUARTER, 1977

| | |
|---|---|
| October 29 | Last Day for Receipt of Applications for Foreign Students Applying from out of the Country |
| December 23 | Last Day for Receipt of Applications for Regular Admission to Winter Quarter |
| December 31 | New Year's Holiday (University Closed) |
| January 4 | Change Day (Late Registration and Class Schedule Adjustments) |
| January 5 | Classes Begin |

(Continued on inside back cover)

Cover by Frank Milone, Fine Arts Graduate,
Florida International University

# FLORIDA INTERNATIONAL UNIVERSITY

# 1976-77 CATALOG

the state university system of florida

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# GENERAL INFORMATION

## GOALS

Florida International University, a member institution of the State University System of Florida, offers upper level and graduate programs designed to achieve three goals:

*Education of Students* — To provide a university education for qualified students which (a) prepares them for useful careers in education, social service, business, industry, and the professions; (b) furnishes them with the opportunity to become effective members of the society; and (c) offers them an appreciation of their relationships to their cultural, aesthetic and technological environments.

*Service to the Community* — To serve the greater community, with a primary emphasis on serving the Greater Miami and South Florida area, in a manner which enhances the metropolitan area's capability to meet the ecological, cultural, social and urban challenges which it faces.

*Greater International Understanding* — To become a major international education center with a primary emphasis on creating greater mutual understanding among the Americas and throughout the world.

## HISTORY

Florida International University was established by the Florida State Legislature on June 22, 1965. On July 11, 1969, the Florida Board of Regents appointed the first president, Charles E. Perry. On September 19, 1972, classes opened with an initial enrollment of 5,667 undergraduate and graduate students. The enrollment grew to nearly 11,000 students in 1975-76.

Early in 1973, the Inter-American Center Authority deeded a tract of land on the Interama site to the Board of Regents for a second campus of Florida International University. Additional land was provided in 1974, and the University's first building on that site was completed during 1976.

## CAMPUSES

The University currently has one major campus location in Southwest Dade County with a planned second major campus to open in North Miami with a limited number of programs in 1977.

*The Tamiami Campus* is located 10 miles west of downtown Miami on the Tamiami Trail SW Eighth Street) between SW 107 and 117 Avenues. It is bounded on the west by the Florida Turnpike. *Florida International University At North Miami* is located at the northern tip of Biscayne Bay, just east of Biscayne Boulevard between NE 135 and 151 Streets. Both campuses are operated under a central administrative plan.

As student needs develop and resources become available, academic programs will be offered on one or both campuses. Students will be able to complete all degree requirements on the campus of their academic major program.

## BUILDING PROGRAM

### Florida International University, Tamiami Campus

The Tamiami Campus is located on a 344 acre site in west central Dade County. Since 1970, six major buildings have been constructed at a cost of $38 million. The campus building plan includes several other structures to accommodate growth needs until 1980.

The campus plan is designed as an interactive complex of facilities connected by internal courts for pedestrian access. The complex is surrounded by a natural buffer of lakes and green areas to provide passive areas for study and relaxation.

*Primera Casa,* the first major building of the Tamiami Campus, opened in 1972. Its five floors house classrooms, laboratories, computer facilities, and administrative offices.

*La Deuxieme Maison,* the second building, opened early in 1973. The four-story

structure houses classrooms, lecture-theatres, academic program and faculty offices.

*University House* accommodates student services offices, recreation and lounge areas, cafeteria, bookstore, an international conference theatre, and a classroom-auditorium seating 200 persons. The building was opened early in 1974.

*Viertes Haus,* a three-story structure opened early in 1975, houses Technology and Fine Arts laboratories, the Experimental Theatre, and media production facilities. The Central Utility Plant, which serves the entire campus, was constructed adjacent to Viertes Haus and opened at the same time.

*Athenaeum,* which houses the Library and the Film Library of the Media Center, opened in the Fall of 1975. This structure also includes a divisible auditorium seating 540 persons for lectures or performances.

*Owa Ehan,* the sixth building, is scheduled for completion in early 1977. This three story structure houses laboratories and faculty offices, classrooms, and laboratories and specialized facilities for Physical Sciences, Biological Sciences, Health Sciences, and Hotel and Food Services.

The Campus, prior to 1970, was the site of the old Tamiami Airport. The former observation tower was remodeled and is presently the location of the campus information center. The former hangars were remodeled for offices, laboratories and recreation facilities on the west part of the campus, where outdoor recreation fields are also located.

**Florida International University At North Miami**

Forida International University At North Miami is located on a 106 acre site in North Dade County on Biscayne Bay. The campus building plan includes structures to accommodate growth needs over a several year period.

*Trade Center Building,* the first building of the Campus, was purchased from The Inter-American Center Authority and remodeled for University use. The three-story structure includes the library, media services, student services, bookstore, computer center, faculty offices, classrooms, and campus administrative offices.

*Academic Building One,* scheduled to open in September of 1978, will house classrooms, faculty offices, admissions and registration offices.

*Student Services Building,* also scheduled to open in September of 1978, will include student activities offices, cafeteria, bookstore, student services offices, recreational space, a large lecture hall, and classrooms.

Several other academic buildings, a library building, an auditorium, and a major conference center will be completed as resources become available.

# GENERAL ACADEMIC INFORMATION

Florida International University offers a variety of academic programs and courses at the bachelors and masters degree levels, all designed to respond to the changing needs of the growing metropolitan area of Dade County and South Florida. Upper level bachelors programs and courses are offered in the College of Arts and Sciences and the five professional schools — Business and Organizational Sciences, Education, Health and Social Services, Hotel, Food and Travel Services, and Technology. Graduate study at the masters level is available in the Schools of Business and Organizational Sciences, Education, Health and Social Services, and Hotel, Food, and Travel Services.

*NOTE* — The programs, policies, requirements, and regulations published in this catalog are continually subject to review, in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes in programs, policies, requirements, and regulations may be made without advance notice.

## ACCREDITATION AND MEMBERSHIPS

All academic programs of Florida International University are approved by the State Board of Education and the Board of Regents of Florida.

The University is an accredited member of the Southern Association of Colleges and Schools. The professional programs of the respective schools of the University are accredited or approved by the appropriate professional associations, or are making satisfactory progress toward full professional accreditation or approval.

The University is also an affiliate member of the Association of Upper Level Colleges and Universities, the American Association of State Colleges and Universities, the Florida Association of Colleges and Universities, the Association of Caribbean Universities and Research Institutes, the American Association of Community and Junior Colleges, the Union of Experimenting Colleges and Universities, and numerous other educational and professional associations.

# ACADEMIC PROGRAMS

## ACADEMIC MAJORS LEADING TO THE BACHELORS DEGREE

### College of Arts and Sciences

*Art
*Biological Sciences
*Chemistry
**Computer Science
Earth Sciences
Economics
*English
Environmental Studies
*French
*German
*History
**Humanities
Interdisciplinary: Philosophy and Religious Studies
**International Relations
Italian
Liberal Studies
*Mathematics
*Music
Philosophy
Physics
Political Sciences
Portuguese
**Psychology
Religious Studies
*Social Sciences
Sociology/Anthropology
*Spanish
Statistics
Theatre

*NOTE: In accordance with University regulations for two majors or two degrees (see page 13), students in these programs may request admission into the programs of the School of Education leading to teacher certification in the corresponding subject matter areas. To do so, they must obtain the approval of their College major advisor and of the Chairperson of the appropriate Division in the School of Education.

**NOTE: One of the initial academic major programs to be offered at the Florida International University at North Miami.

### School of Business and Organizational Sciences

**Accounting
Cuban CPA
Finance
Insurance and Risk Management
International Management
**Management
Management Information Systems
**Marketing
Personnel Management
Public Administration
Real Estate
Transportation
Urban Affairs

**NOTE: One of the initial academic major programs to be offered at Florida International University At North Miami.

### School of Education

*Art
*Biological Sciences
Early Childhood Education
Elementary Education
Emotional Disturbance
*English
Health Education
*History
**Home Economics
Industrial Arts
*Mathematics
Mental Retardation
*French
*German
*Spanish
*Music
Physical Education (1-12)
*Physical Sciences
***Parks and Recreation
*Social Studies
Behavioral Disorders
Intellectual Differences
Specific Learning Disabilities
Technical Education
Vocational Industrial Education

*Remark:* The following programs are the initial academic majors from the School of Education to be offered at Florida International University At North Miami: Emotional Disturbance, Mental Retardation, Special Learning Disabilities, Elementary Education and Early Childhood Education.

*NOTE: In accordance with University regulations for two majors or two degrees (see page 13), students in these programs may request admission into the programs of the College of Arts and Sciences leading to the discipline majors in the corresponding subject matter areas. To do so, they must obtain the approval of their School major advisor and of the chairperson of the eppropriate College Department.

**NOTE: Interdisciplinary program offered by the Schools of Education, Technology and Health and Social Services.

***NOTE: Does not lead to teacher certification.

### School of Health and Social Services

**Criminal Justice
Dietetics and Nutrition
Health Science
Home Economics
Medical Technology
Nursing
Occupational Therapy
Physical Therapy
**Social Work

**One of the initial academic major programs to be offered at Florida International University At North Miami.

### School of Hotel, Food and Travel Services

General Hospitality Management
Hotel-Motel Management
International Hotel Management
Restaurant and Food Service Management
Tourism and Travel Management
Condominium/Cooperative and Apartment Management

### School of Technology

Architectural Technology
Civil Engineering Technology
Construction Engineering Technology
Electrical Engineering Technology
Environmental Engineering Technology
Interior Design
Mechanical Engineering Technology
Urban Systems Engineering Technology
Divisional Majors:
Construction
Environmental and Urban Systems
Industrial Technology

## FLORIDA INTERNATIONAL UNIVERSITY AT NORTH MIAMI ACADEMIC PROGRAM

The second major campus of the University is presently in the advanced planning stage. The academic major programs listed below are planned to be in full operation for 1977-78. However, many courses selected from those programs and electives may be offered at the Florida International University At North Miami at an earlier date. Courses taken for credit at the Florida International University At North Miami prior to the planned full program offerings will, of course, satisfy degree and program major requirements at either campus of the University.

Students taking courses at either campus prior to being admitted to an academic major program should consult with a faculty advisor in the School or program, as appropriate, before course registration.

The general and academic policies and regulations of the University apply to students at both campuses of the University. Consult the requirements given for the desired degree and academic major described elsewhere in this catalog.

### INITIAL COURSES

Selected major programs and electives may be offered at the Florida International University At North Miami during 1976-77, depending on available state funds.

Students taking courses then in consultation with a faculty advisor in the School or program of their desired degree and major would be able to continue a planned program of courses when the complete academic major programs are offered.

The course offerings for each academic quarter are listed in the course schedule published prior to the registration period.

| *College/School* | *Level* | *Major Program* |
|---|---|---|
| School of Business and Organizational Sciences | Undergraduate | Accounting<br>Management<br>Marketing |
| | Graduate | Master of Business Administration<br>Master in Management (Accounting)<br>Master in Management (Public Administration) |
| School of Education | Undergraduate | Behavioral Disorders<br>Mental Retardation<br>Specific Learning Disabilities<br>Elementary Education<br>Early Childhood Education |
| | Graduate | Behavioral Disorders<br>Mental Retardation<br>Specific Learning Disabilities<br>Elementary Education<br>Early Childhood Education |
| School of Health and Social Services | Undergraduate | Criminal Justice<br>Social Work |
| College of Arts and Sciences | Undergraduate | Humanities<br>Psychology<br>International Relations (minor in Political Science)<br>Computer Science |

**State University System External Degree Program**

Many of the undergraduate majors offered by the College of Arts and Sciences, the School of Business and Organizational Services, the School of Health and Social Services, the School of Hotel, Food and Travel Services, and the School of Technology, are offered through the State University System External Degree Program.

Consult the academic program in which you are interested to determine if it is also offered through the External Degree Program.

NOTE: In order to be admitted to the External Degree Program, a student must first be admissable to the University in a *regular* degree program.

**Division of Continuing Education and Special Programs**

A student can earn credit toward the *bachelors* degree in courses and programs offered through the Department of Off-Campus Credit Programs.

## ACADEMIC MAJORS LEADING TO THE MASTERS DEGREE

### School of Business and Organizational Sciences

- **Business Administration
- Management: concentrations in
- **Accounting
- Finance
- **Public Administration
- Real Estate
- Health Care Management
- International Business

### School of Education*

*Curriculum and Instruction:*
concentrations in

- **Early Childhood Education
- **Elementary Education
- Reading
- Art
- Science Education
- English
- Adult Education, General
- Health Education
- Home Economics Education
- Industrial Arts
- Mathematics
- Music
- Physical Education
- Parks and Recreation Administration
- Social Studies
- Technical Education
- Vocational Industrial Education

*Psycho-Educational Services:*
concentrations in

| | |
|---|---|
| **Emotional Disturbance | Counselor Education |
| **Mental Retardation | School Psychology |
| **Specific Learning Disabilities | |

*Administration and Supervision:*
concentrations in

| | |
|---|---|
| Elementary School Administration | Elementary School Administration and Supervision |
| Secondary School Administration | Secondary School Administration and Supervision |
| Administration of Adult Education | Educational Administration and Supervision, General |
| Administration of Vocational Education | |
| Elementary School Supervision | |
| Secondary School Supervision | |

*Programs meet Rank II certification requirements
**One of the initial academic major programs to be offered at Florida International University At North Miami.

### School of Hotel, Food and Travel Services
Hotel and Food Service Management

### School of Health and Social Services
Dietetics and Nutrition

## ACADEMIC DEGREES

### College of Arts and Sciences
Bachelor of Arts
Bachelor of Fine Arts
Bachelor of Science

### School of Business and Organizational Sciences
Bachelor of Business Administration
Bachelor of Public Administration
Master of Business Administration
Master of Science in Management

### School of Education
Bachelor of Science
Master of Science

### School of Health and Social Services
Bachelor of Science
Master of Science in Dietetics

### School of Hotel, Food, and Travel Services
Bachelor of Science
Master of Science in Hotel and Food Service Management

### School of Technology
Bachelor of Science
Bachelor of Technology

### School of Independent Studies
Bachelor of Arts
Bachelor of Fine Arts
Bachelor of Science
Bachelor of Business Administration
Bachelor of Technology

# ADMISSION

## UNDERGRADUATE PROGRAMS

A student who has completed an *Associate of Arts* degree at a Florida public community college, or has earned 90 quarter hours (60 semester hours) of collegiate work at any other accredited institution at an acceptable performance level, and has completed the general education requirements (or the equivalent) as listed in the Academic Regulations of the catalog, is eligible for admission to the degree program of his or her choice.

A student who has completed an *Associate of Science* degree, or has earned 90 quarter hours (60 semester hours), at a Florida public community college, and who has completed at least 40 quarter hours of the 54 quarter hours of general education requirements (or the equivalent) as listed in the catalog, is eligible for admission to the degree program of his or her choice.

A student who meets the above admission requirements, but who has not completed the remaining general education course requirements and/or the prerequisite courses for admission to a particular degree program, may complete his or her preparatory work either (a) at a Florida public community college or accredited institution, or (b) in the College and Schools of Florida International University, or (c) achieve a satisfactory score on the approved CLEP examination.

The School of Technology normally regards the *Associate of Science* degree in an appropriate technical discipline as the full equivalent to the first two years (90 quarter hours) of the *Bachelor of Technology* program.

An undergraduate student, who has been denied admission to a program of the University for *academic* reasons, may appeal the decision through the following steps: the Chairperson of the program, the Dean of the College or School of the program, the Vice President for Academic Affairs. An undergraduate student, who has been denied admission to the University for other than academic reasons, may appeal to the Dean of Student Services.

## GRADUATE PROGRAMS

A student seeking admission into a graduate program of the University must meet the minimum standards set forth by the Florida Board of Regents as follows:

A bachelor's degree or equivalent from a regionally accredited university or college.

A "B" or better average in all work attempted while registered as an upper division student for the bachelors degree, *OR* a total score (quantitative plus verbal) of 1,000 or higher on the *Graduate Record Examination* or an equivalent score on some other measure specified by the University.

An applicant who does not have a "B" average on his or her upper level work is required to present a score of 1,000 on the *Graduate Record Examination* (School of Education, School of Health and Social Services, and the School of Hotel, Food and Travel Services) or 450 on the *Graduate Admission Test* (School of Business and Organizational Sciences). All graduate applicants to the School of Business and Organizational Sciences — regardless of previous grade-point average — are required to submit the appropriate aptitude test scores. If applying to the Public Administration or the Health Care Management programs in the School of Business and Organizational Sciences, the appropriate test is the Graduate Record Examination (GRE) rather than the GMAT.

NOTE: Grades earned at institutions with non-traditional grading systems will be given every consideration at Florida International University. Applicants will be treated equally with students from institutions with traditional grading systems.

It is possible for an applicant who fails to meet these criteria, to appeal the admission decision and be considered under the Board of Regents' 10 per cent policy. This policy allows up to 10 per cent of the graduate students admitted for a particular academic year to be admitted as exceptions to the above criteria.

## ADMISSION PROCEDURES

Undergraduate and graduate *degree-seeking students* may obtain an application for admission, catalog and other admission material from the Office of Admissions and Community College Relations, Florida International University, Tamiami Trail, Miami, Florida 33199. Students desiring admission to an academic program offered at Florida International University At North Miami should contact the Admissions and Records office at that campus. Course registration information will be provided then.

Completed admission application and all supporting credentials must be on file with the Office of Admissions and Community College Relations before a final decision can be made regarding the acceptance of an applicant. The following credentials are required by the Florida Board of Regents for admission:

*Application for Admission:* A fifteen dollar ($15) *non-refundable* application fee must accompany the completed application form. The deadline for accepting applications each quarter is contained in the University Calendar given in the catalog.

*Completed Academic Record:* Official transcripts must be forwarded to the Office of Admissions by the Registrar of all college-level institutions attended. It is the *responsibility of the applicant* to initiate requests for necessary transcripts (including final transcripts) from each post-secondary institution attended.

NOTE: Transcripts must be received no later than 15 days preceding the first day of class.

*Student Health Form:* Every student must complete a student health form. The forms will be supplied after a student is admitted to the University.

## REGISTRATION

During each academic quarter, an *Official Registration Period* is held, during which time all currently enrolled students who anticipate enrolling in the following quarter are expected to register for their courses. The new student will be notified of registration dates at the time he or she is officially notified of admission to the University.

### LATE REGISTRATION FEE

Approximately five weeks after each quarter begins, the official registration period for the *next* quarter begins. During the two week registration period, all currently-enrolled, degree-seeking students are expected to register. Those who fail to register then, and who subsequently request to register on Change Day or thereafter will be assessed a $25 late registration fee.

Although new and non-degree students are encouraged to register during the official two-week registration period, they are not required to register until Change Day. Those students who request to register during the first week of classes will be assessed a $25 late registration fee.

### VETERAN'S REGISTRATION

The Office of Registration and Records will assist a student eligible for veteran's benefits during his or her enrollment at the University. Any student in doubt concerning his or her eligibility should contact the office to avoid any loss of veteran's eligibility and benefits. The veteran who desires personal counseling or tutoring should contact the Director of Veterans Program in the Division of Student Services.

### SPECIAL STUDENT (NON-DEGREE SEEKING) REGISTRATION

The Special Student classification is primarily designed for the person who is not interested at the time of registration in working toward a degree at Florida International. The following regulations will apply to a person registered as Special Student:

- He or she is not required to meet the usual admission requirements. Such a student is *not* officially admitted as a regular student and registration as a *special student* in no way implies future admission as a regular, degree-seeking student;

- He or she must complete a non-degree registration form *each* quarter;
- Registration is on a space-available basis and is determined at the time of registration, on Change Day, or during Late Registration.
- Credit earned will *not* be counted toward a degree at Florida International unless the student subsequently applies for regular admission and is accepted as an undergraduate or graduate student.
- No more than the following quarter hours earned as a special student may be counted toward a degree:

  Graduate Level ..... 15 quarter hours
  Undergraduate Level ..... 20 quarter hours

The appropriate Dean must approve the acceptance of credit earned as a special student;

- If a change to regular, degree-seeking student status is desired, an appropriate application must be filed in the Office of Admissions;
- Regular Rules of Scholarship will apply;
- A faculty advisor is not assigned, but academic counseling is available from the academic unit offering the course.

NOTE: A foreign student is not permitted to enroll as a special student. Immigration regulations require a foreign student to be degree-seeking.

# ACADEMIC REGULATIONS

NOTE: Questions concerning the University's academic regulations should be directed first to the student's academic advisor. Subsequent concerns may be directed to the appropriate Dean or the Office of Registration and Records.

## GENERAL REGULATIONS

### DEGREE REQUIREMENTS

Florida International University will confer the bachelors degree when the following conditions have been met:

Certification by the Dean of the College or School concerned that all requirements of the degree being sought have been completed.

Recommendation of the Faculty of the College or School awarding the degree.

Successful completion of a minimum of 180 credit hours.

Completion of the last 45 credit hours of coursework at Florida International University.

Maintain at least a 2.0 G.P.A. on all FIU coursework.

Satisfactory completion of Florida International University's general education requirement.

Florida International University will confer the *masters* degree when the following conditions have been met:

Certification by the Dean of the College/School concerned that all requirements of the degree being sought have been completed.

Recommendation of the faculty of the College/School awarding the degree.

Successful completion of a minimum of 90 quarter hours for degrees requiring two years of work and 45 quarter hours for those requiring one year of work.

Maintain at least a 3.0 G.P.A. on all FIU coursework.

NOTE: Normally, a minimum of 35 quarter hours must be completed at Florida International University for a 45-quarter-hour program and 75 quarter hours for a 90-quarter-hour program.

### GENERAL EDUCATION REQUIREMENTS

Florida International University requires that all undergraduate students must have completed a general education program prior to graduation. The general

education program as presently defined by the Board of Regents consists of 54 quarter hours (36 semester hours). Florida International University recognizes the following general education program: 9 quarter hours each in the areas of social science, natural science, English composition and humanities; 4 quarter hours in mathematics, and 14 quarter hours of electives in the above areas. In this connection, the following policies have been established:

- A student who has graduated from a Florida public community college with an *Associate in Arts* degree shall be considered as having met the general requirements of Florida International University;
- A student who has met the general education requirements of any institution in the State University System of Florida shall be considered as having met the general education requirements of Florida International University;
- A student who has taken his or her freshman and sophomore years in a college other than a Florida public community college or at an institution in the State University System of Florida may similarly receive credit for such courses shown on his or her transcripts as meeting the general education requirements;
- A student may be admitted before completion of an equivalent general education program provided such a program can be completed through an inter-institutional registration arrangement with a Florida public community college or through some other arrangements designed to meet individual needs as noted in the section describing the undergraduate admission standards.



## CLASSIFICATION OF STUDENTS AND COURSE LOADS

Students are classified by the Office of Registration and Records as follows:

*Junior:* Through 134 quarter hours credit.

*Senior:* 135 or more quarter hours credit, but no baccalaureate degree earned at Florida International University or elsewhere.

*Post-Baccalaureate:* Any student enrolled in graduate level courses who has earned a bachelors degree but is not admitted to a graduate degree program.

*Graduate:* Any student admitted to a graduate program.

*Special Student:* Any non-degree seeking student enrolled in undergraduate or graduate level courses who has not earned a bachelor's degree.

In terms of credit-hour-load, students are classified as full-time according to the following minimum schedule:

| | *Undergraduate Quarter Hours* | *Graduate Quarter Hours* |
|---|---|---|
| Credit-Hour Loads | 10* | 10* |
| Selective Service | 12 | |
| Veterans Benefits (full allowance) | 12 | 9 |
| Veterans Benefits (3/4 allowance) | 9 | 7 |
| Veterans Benefits (1/2 allowance) | 6 | 5 |
| Foreign Students (F-1 Visa) | 15 | 10 |

*Part-time students are those taking less than the figure indicated. The typical course load for a full-time undergraduate or graduate student is 15 quarter hours. A course load of more than 20 quarter hours must be approved by the student's advisor *and* dean (or designee). An *undergraduate foreign student* must carry and satisfactorily complete 15 quarter hours each quarter, and a *graduate foreign student* must carry and satisfactorily complete 10 quarter hours each quarter to meet the full-time status requirement of the Immigration and Naturalization Service.

## CLASS ATTENDANCE

The University does not require class attendance and does not maintain penalties for non-attendance. Individual faculty may establish attendance criteria in classes where it is necessary for academic reasons. The individual academic units may establish their own attendance policies with the approval of the Vice President for Academic Affairs.

### STUDENT RECORDS

Legislative Act authorizes the Florida Board of Regents, through the State Board of Education, to prescribe the data to be included in student records maintained by a University, and to limit access to such records to the student, and members of the professional staff of the University who have need for such information. The President, through designated staff, is authorized to release information from a student's record when required in the discharge of his official responsibilities, when authorized in writing by the student, or when ordered by a court of competent jurisdiction.

## PROGRAM AND COURSE REGULATIONS

### COURSE SELECTION

*Credit* — The term "credit" as used refers to one hour of classwork or the equivalent each week for an entire academic quarter.

*Major* — An integral part of the bachelors and masters degree is a major concentration of course work in an approved academic discipline or area. The major areas of study are listed on pages 5-8 of the Catalog. The exact course and credit requirements and prerequisites for each major are outlined in the departmental or program areas of the Catalog.

*Electives* — A student may usually select courses from any academic area to complement his or her major area(s) of study or meet his or her interests, in order to fulfill the credit hour requirements for the bachelors or masters degree. Prerequisite course requirements should be considered in selecting elective courses.

*Minor Program* — A Minor Program is an arrangement of courses that enables the student to develop some degree of expertise in one area of study. A minor is associated with the completion of the bachelors degree, but is not interdisciplinary in nature.

*Certificate Program* — In the College and Schools of the University, a Certificate Program is a combination of courses with a common base or interest selected from one or more academic disciplines and so arranged as to form an area of academic concentration. Two types of certificates are awarded by the College or Schools:

*Academic Certificate* — awarded with the bachelors degree, or upon completion of an approved area of concentration to a student already possessing a bachelors degree. This certificate is *interdisciplinary* in nature.

*Professional Certificate* — awarded to a student upon completion of an approved area of concentration. This certificate need not be interdisciplinary in nature nor associated with the bachelors degree.

A *Certificate in Continuing Studies* is awarded to a person who has attended a conference, seminar, or program sponsored by the Division of Continuing Education and Special Programs.

*Two Majors* — Any undergraduate student who elects to do so may carry two majors and work to fulfill the requirements of both concurrently. Upon successful completion of the requirements of two majors, a student will be awarded only ONE degree unless a minimum of 45 appropriate, quarter hours in addition to the requirements of the first degree have been earned. In cases where the requirements of two majors have been met and only one degree is involved, a notation denoting both majors will be entered on the transcript.

*Two Degrees* — Two bachelors degrees may be awarded simultaneously when the following conditions have been met:

1. Requirements for two majors have been completed as certified by the appropriate academic units.
2. A minimum of 45 appropriate, quarter hours in addition to the requirements of one degree has been earned.

A graduate from an accredited four-year institution who applies for admission to work toward a second bachelors degree must meet the requirements of the major department which shall include (but is not limited to) a minimum of 45 quarter hours of course work, as well as any other University-wide graduation requirement.

*Change of Major* — A student may change majors by processing a *Request for Changes of Major* form. The form and directions are available in the Office of Registration and Records.

## TRANSFER CREDIT

An undergraduate student admitted to the University will receive credit for all previous academic work appropriate to the degree desired in accordance with the Articulation Agreement with Florida public community colleges, the program standards of the academic department or program, and the limitations noted below. Although the actual awarding of transfer credit is made by the Office of Admissions and Community College Relations, the final determination regarding applicable transfer credit accepted toward the fulfillment of degree requirements rests with the Dean of the College or School in which the student is enrolled.

### Limitations on Transfer Credit

A student transferring from a four-year college may transfer up to 135 quarter hours (90 semester hours), and those transferring from two-year colleges may transfer up to 90 quarter hours (60 semester hours) toward a bachelors degree. In individual cases, at the discretion of the appropriate academic dean, a greater number of credits may be transferred.

Normally, the grade of "D" will be accepted for transfer; however, such coursework in the major field is subject to review and approval by the appropriate dean.

Normally, credit from non-accredited institutions will not be accepted; however, such credit, when presented, will be considered on an individual basis by the appropriate College or School.

Credit from military schools will be considered for transfer in accordance with the recommendations of the American Council on Education.

Credit from foreign institutions will be considered on an individual basis. Credit will be granted for all work which is applicable toward the degree being sought.

## ACCELERATION

The academic programs of the University are planned in such a manner that a student may complete some of his or her upper division degree requirements through one or more of the mechanisms listed below. Specific information on the accelerated mechanisms utilized in each academic program is available from the department or program of the student's major.

### College Level Examination Program (CLEP)

The College Level Examination Program is designed to measure knowledge in certain subject matter areas of General Education. There are two types of CLEP tests: the General Examination and the Subject Examination.

Because CLEP credit is regarded as transfer credit, no matter how earned, the maximum transferability of credit under CLEP, both General and Subject examinations combined, is 45 semester (or 67.5 quarter) credits.

Not more than six semester (or nine quarter) hours will be transferred in each of the five areas of the General Examinations (English, Humanities, Mathematics, Natural Sciences, Social Sciences — History).

NOTE: A student who desires additional information on CLEP should contact the Office of Admissions and Community College Relations.

### Departmental Credit by Examination

Departmental credit by examination is available for certain courses. A student who has already gained knowledge of a subject offered at the University and who wishes to take an examination in lieu of taking the course should discuss the matter with his or her academic advisor *and* with the department offering the course.

Awarding departmental credit by examination is the prerogative of each academic unit. To receive credit by examination, a student must be a regular, degree-seeking student and register for the courses in the regular manner.

### CREDIT FOR LIFE/WORK EXPERIENCES

*Undergraduate* — The awarding of credit for life/work experience is the prerogative of each academic department or program. Only the degree-seeking student is eligible to receive this type of credit. The experiences must be applicable to the degree program of the student, and should be discussed and appropriately documented at the time the desired program of study is initially discussed and decided with the student's program advisor.

*Graduate* — Graduate credit, per se, will not normally be awarded for life experience, nor will life experience credit be used to meet requirements for the masters degree. In cases where a student's life experience would appear to have been sufficient to develop the understanding and skills associated with a course that would otherwise be included in his graduate program of study, he or she will be allowed to register for Independent Study credits and demonstrate competency through development of an appropriate project acceptable to the faculty person who represents that specific area of specialization. Not more than 20 quarter hours of a 45 credit masters degree, nor 30 quarter hours of a 90 credit masters degree, may be so earned. A student wishing to have this policy waived, wholly or in part, may petition the Dean of the Academic unit to which he or she has been admitted for special consideration and final responsibility for a decision will rest with that Dean.

### TRAVELING SCHOLAR PROGRAM

The University participates in a traveling scholar program which enables a *graduate* student to take advantage of special resources available on another campus but not available on his or her own campus: special course offerings, research opportunities, unique laboratories, and library collections. Further information may be obtained from the Dean of the graduate program in which the student is enrolled.

### DROPPING AND ADDING COURSES

The first week of each quarter is the official drop/add period. During this period, a student may *add* courses, *drop* courses (no records kept), *withdraw* from the University (with a fee refund).

Courses officially dropped during the second through the eighth weeks of classes are recorded on the transcript with a symbol of DR (dropped).

### REPEATED COURSES

A student who *repeats* a course for which credit was not received may have that designation removed from the transcript record by filing a *Repeated Course Form* with the Office of Registration and Records.

A student may repeat a course as many times as he/she wishes; only the last grade will be recorded on transcript and calculated in G.P.A.

### FINAL EXAMINATIONS

While the University calendar does not designate specific dates as a final examination period, final course examinations may be given at the discretion of the faculty member teaching the course.

### APPLICATION FOR GRADUATION

Each student who plans to graduate is required to submit to the Office of Registration and Records an *Application for Graduation* Form. This form (supplied by the Office of Registration and Records) must be submitted before the end of the third week of classes of the academic quarter in which graduation is expected. There is no charge for applying for graduation.

**WITHDRAWAL FROM THE UNIVERSITY**

A student who wishes to leave the University during the quarter for any reason whatsoever must *officially* withdraw through the Office of Registration and Records.

A student who *officially registers* for a particular quarter and who subsequently decides not to attend (no shows) or to leave during the quarter must *officially withdraw* from the University through the Office of Registration and Records. (Dropping all courses is equated to a withdrawal. Therefore, a *withdrawal form* instead of a drop/add card *MUST* be completed).

The transcript record of a student who withdraws during the first week of classes will contain NO references to the student being registered that quarter.

The transcript record of a student who *officially withdraws* after the first week and before the end of the ninth week of classes will contain a *WI* for each course.

The transcript record of a student who stops attending the University without officially withdrawing will contain a *NC* grade for each course.

**READMISSION**

A student once enrolled in the University, but who has not enrolled in any course for one year or more, is eligible for readmission under the regulations operative at the time of readmission. Such a student should contact the Office of Registration and Records.

**GRADING SYSTEM**

| *Grades* | *Definition* | *Grade Points Per Credit Hour* |
|---|---|---|
| A | Excellent | 4 |
| B | Good | 3 |
| C | Average | 2 |
| D | Poor | 1 |
| CR | Satisfactory | N/A |
| NC | No Credit | N/A |
| IN | Incomplete | N/A |
| WI | Withdrew from University | N/A |
| AU | Audit | N/A |
| DR | Dropped Course | N/A |
| NR | Grade Not Reported | N/A |
| EM | Examination | N/A |

NOTE: All courses for which a student is officially registered at the end of the first week of classes and on which a grade of A, B, C, or D is received are calculated in the GPA.

**DEAN'S LIST**

Any undergraduate student who earns a quarter average of 3.5 or better on 10 or more hours of course work for which grade points are earned and who does not receive an NC grade for the quarter is placed on the Quarter Dean's List. This achievement is noted on the student's quarterly report of grades and permanent academic record.

**ACADEMIC HONORS (UNDERGRADUATE)**

To graduate *WITH HONORS* requires a cumulative GPA between 3.50 — 3.749 with no more than two NC grades.

To graduate *WITH HIGH HONORS* requires a cumulative GPA of 3.75 — 3.999 with no more than one NC grade.

To graduate *WITH HIGHEST HONORS* requires a cumulative GPA of 4.0 with no NC grades.

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To graduate *WITH HIGHEST HONORS* requires a cumulative GPA of 4.0 with no NC grades.

**ACADEMIC WARNING, PROBATION AND DISMISSAL**

*WARNING:* A student whose cumulative GPA falls below a 2.0 (undergraduate) or 3.0 (graduate) will be placed on *WARNING* indicating academic difficulty.

*PROBATION:* A student on *WARNING* whose cumulative GPA falls below a 2.0 (undergraduate) or 3.0 (graduate) will be placed on *PROBATION* indicating serious academic difficulty. The College/School of the student on *PROBATION* will appropriately communicate conditions which must be met in order to continue to enroll in the program.

*DISMISSAL:* A student on *PROBATION* whose cumulative and quarterly GPA falls below a 2.0 (undergraduate) or 3.0 (graduate) will be automatically dismissed from his/her program and the University. The student has ten working days to appeal the dismissal decision. This appeal must be made in writing to the Dean of the College/School in which he/she is enrolled. If the student's appeal is denied, the student's dismissal from the University is for a minimum of four (4) quarters. After four quarters, the student may re-apply to the University in the same program, a different program or register as a special student.

**CREDIT/NO CREDIT OPTION**

The College/Schools may specify particular courses which may be taken for grades of CR/NC *only* and those which may be taken, at the option of the student, for either a CR/NC or a regular ABCD/NC grade. A student who decides to take a course that has been designated for CR/NC grading or ABCD/NC grading, must indicate at the time of course registration which grading option is desired. Once the grading option has been indicated, a student will *not* be allowed to change his or her mind.

**CHANGE OR CORRECTION OF GRADES**

Once submitted, end-of-quarter grades (except incompletes) are final and are subject to change *only* through a *Change of Grade* Form to correct an error in computation or transcribing, or where part of the student's work has been unintentionally overlooked. A change-of-grade form requires the instructor's statement as to the reason for the change, the instructor's signature, and the approval of the appropriate Academic Dean, and must be submitted within one calendar year after the date of the initial end-of-quarter grade.

**GRADE REPORTS**

At the end of each quarter, the Office of Registration and Records provides each registered student a copy of his or her grades.

# FOREIGN STUDENTS

## UNDERGRADUATE AND GRADUATE ADMISSION STANDARDS AND PROCEDURES

A foreign student must meet the regular admission requirement of the University *and* comply with the following:

*Application and Fee:* A completed admission application must be received by the University at least 6 months prior to the desired entering date together with the non-refundable $15 (U.S. dollars) fee.

*Academic Records:* Proper transcripts or certified copies of academic records and their English translations, validated by an official public translator, and all other appropriate credentials must be forwarded to the Office of Admissions.

*Proficiency in English:* Proficiency in English must be established, if the native language is not English. Since the University does not have a program of English as a foreign language, it must have evidence that proficiency is sufficient to immediately begin a full-time, degree-seeking program. The following are accepted ways to verify proficiency:

- A minimum score of 500 in the Test of English as a Foreign Language (TOEFL). For information write to: The TOEFL Program, Box 899, Princeton, New Jersey, 08540, U.S.A.
- ELS Language Center Certification of satisfactory completion at the 109 level of proficiency. For information write to: ELS Language Center, c/o Barry College, 11330 N.E. Second Avenue, Miami, Florida 33161, U.S.A.
- The ALIGU Test, (American Language Institute, Georgetown University) Washington, D.C. 20007.
- Successful completion of 45 quarter hours (30 semester hours) of course work in an American college or university including 9 quarter hours (6 semester hours) of English Composition.

*Declaration and Certification of Finance:* A Declaration and Certification of Finances must be completed before the Certificate of Eligibility (Form 1-20A) is issued. Upon receipt of application for admission the Declaration and Certification of Finances will be mailed to the applicant.

The University is required by immigration authorities to carefully check the financial resources of each student prior to issuing the Form 1-20A. Therefore, it is important that the applying student know the costs of attending the University and have the necessary support funds for the period of enrollment.

Before completing the Declaration and Certification of Finances, review the estimate of institutional costs and living expenses. The total funds available to the student for the first and/or second academic years must at least equal the total estimates of institutional costs and living expenses. All questions in the Declaration and Certification of Finances must be accurately answered to avoid unnecessary delay in processing.

After completing, return the document to: Office of Admissions and Community College Relations, Florida International University, Tamiami Trail, Miami, Florida 33199 U.S.A.

The Declaration and Certification of Finances must be received by the University at least two months prior to the beginning of the quarter for which student expects to register. If the student is in the U.S., said document is due at least one month before the first day of classes.

*Health Insurance:* Florida International University requires that all foreign students purchase health insurance in order to help pay for Major Medical expenses. The health insurance policy should be kept active as long as the student is enrolled at the University. Information on the most economical plans are available from the Foreign Student Services Department.

*Graduate Students:* For information about the GRE and GMAT, write to Educational Testing Service, Princeton, New Jersey, 08540, U.S.A. Information about test center location also may be obtained in the American Embassy in student's home country.

*Tuition:* A foreign student is considered a non-resident, and as such will be assessed non-resident fees. The minimum charge for a foreign student is $705.00 per quarter (undergraduate) or $570.00 per quarter (graduate). Fees are subject to change without notice.

NOTE: Opportunities for financial assistance are limited if a foreign student is not a resident alien or a U.S. citizen.

*Full-Time Enrollment:* The non-immigrant alien student on an F-1 visa is required by United States Immigration regulations to be enrolled full-time except for summer session. He or she should make satisfactory progress toward the bachelor or master degree program objectives each term. Otherwise the continuation of study on a student visa may be jeopardized. Full-time enrollment for a student on an F-1 visa (student visa) is defined as enrollment in, and successful completion of, a minimum of 15 quarter hours each quarter (undergraduate) and 10 hours each quarter (graduate).

United States Department of Justice, Immigration and Naturalization Service Law and Regulations: It is the student's responsibility to comply with all non-immigrant

alien requirements as stated under the United States laws under Section 101 (a) (15) (f) (i) of the Immigration and Nationality Act. The University is required to report to the Immigration Office any non-immigrant alien student who:

a) Does not register at the University at the time expected.
b) Does not carry a full course of studies.
c) Terminates attendance.

Granting official Extension of Stay is dependent upon the student making normal academic progress toward the bachelors or masters requirements.

*Employment:* An F-1 visa student may not be employed off campus while attending the University unless permission has been granted by the U.S. Immigration and Naturalization Service. Normally, employment will not be permitted, especially during the student's first year of enrollment. Only under very special circumstances because of unexpected conditions or emergencies which arise after the student's arrival, will a foreign student be recommended for a work permit. Adequate proof must be presented to the Foreign Student Advisor in order to obtain the necessary authorization from that institution. On campus employment can be authorized by the Foreign Student Advisor.

NOTE: A foreign student will not be granted admission to the University until all academic and non-academic requirements have been met, including the Declaration and Certification of Finances. Under no circumstances should a student come to Florida International University without having received the official Letter of Admission and the I-20 Form.

# FEES AND REFUNDS

## FEES

The fees are established by the Board of Regents and the State Legislature. At the time of this printing the fees for the 1976-77 academic year have not been established. As a guide, the fee structure for the 1975-76 academic year was as follows:

| | *Florida Residents* | *Non-Florida Residents* |
|---|---|---|
| Upper Level Undergraduate Courses | $15.00 per qtr. hr. | $47.00 per qtr. hr. |
| Graduate Courses | $20.00 per qtr. hr. | $57.00 per qtr. hr. |
| Thesis | $22.00 per qtr. hr. | $59.00 per qtr. hr. |

Fees are based on the level of each course attempted. The dates by which fees must be paid for each academic quarter may be obtained from the University Cashier's Office. Current fee information can be obtained upon request from the Cashier's Office.

NOTE: Registration is not complete until fees are paid.

## REFUNDS

A full refund of fees will be made if a student withdraws completely from the University *on or before the last day of late registration.* A full refund will be made if the University cancels a student's registration on or before the end of the late registration.

After the end of late registration there will be no refund of Registration Fees except in the following cases:

- Death of the student.
- Illness of the student so severe that it prevents completion of the program for which the student is registered. A doctor's certificate of this illness is required.
- Involuntary call to military service.

In the above instances the per hour fee less $3.35 per hour will be refunded.

No refund will be made under this policy except upon proper application through the Cashier's Office.

## PAST DUE STUDENT ACCOUNTS

All student accounts are due and payable at the Cashier's Office, Room 212, Primera Casa, at the time such charges are incurred.

Delinquent accounts will be considered sufficient cause to prohibit registration, graduation, granting of credit, or release of transcript for students. The University is not able to grant credit or time payments for any fees. Financial aid is available for those qualifying from the Office of Financial Aid. A limited number of short term loans are available to individuals who may experience problems in meeting fee due dates.

## CLASSIFICATION OF STUDENTS FOR TUITION PURPOSES — FLORIDA OR NON-FLORIDA

The policy relating to the classification of students for tuition purposes is defined by the Florida Board of Regents as follows:

### FLORIDA STUDENT DEFINITION

For the purpose of assessing registration fees, a student shall be classified as Florida or non-Florida. A Florida student is a person who shall have resided and had his or her domicile in the State of Florida for at least twelve (12) consecutive months immediately preceding the first day of classes of the current term.

In applying this policy, "student" shall mean a person admitted to the institution. If such person is a minor, it shall mean parents, parent, or legal guardian of his or her person.

The word "minor" shall mean a person who has not attained the age of 18 and whose disabilities of minority have not been removed by reason of marriage or by a court of competent jurisdiction.

The word "domicile" for fee-paying purposes shall denote a person's true, fixed, and permanent home and place of habitation. It is the place where the person intends to remain, and to which the person expects to return after a leave without intending to establish a new domicile elsewhere.

The word "parent" shall mean a minor's father, or mother; or if one parent has custody of the minor, the parent having custody; or if there is a guardian or legal custodian, of the minor, then such guardian or legal custodian.

In all applications for admission by a student as a citizen of Florida, the applicant, or if a minor, the parents or legal guardian shall make and file with such application a written statement under oath that such applicant is a bonafide citizen, resident, domiciliary of the State of Florida entitled as such to admission upon the terms and conditions prescribed for citizens, residents, and domiciliaries of the State.

A non-Florida student is a person not meeting the requirements above. A non-Florida student (or, if a minor, the parent or parents) after having been a resident and domiciliary of Florida for twelve months may apply for and be granted reclassification prior to the first day of classes of any subsequent term; provided, however, that those students who are non-resident aliens or who are in the United States on a non-immigration visa will not be entitled to reclassification. However, for fee-paying purposes, Cuban nationals will be considered as resident aliens. Such application shall comply with the provisions above. In addition, the application for reclassification must be accompanied by a certified copy of a declaration of intention to establish domicile filed with the clerk of the Circuit Court as provided by Section 222.17 Florida Statutes.

Unless the contrary appears to the satisfaction of the registering authority of the institution at which a student is registering it shall be presumed that:

1. The spouse of any person who is classified or is eligible for classification as an in-state student is likewise entitled to classification as an in-state student.
2. A minor whose parent is a member of the armed forces and stationed in this State pursuant to military orders is entitled to classification as an in-state student. The student, while in continuous attendance, shall not lose residence when the parent is thereafter transferred on military orders. A member of the armed forces of the United States stationed in this State on military orders

shall be entitled to classification as an in-state student while on active duty in this state pursuant to such orders.

3. No person over the age of 18 years shall be deemed to have gained residency while attending any educational institution in this State as a full-time student, as such status is defined by the Board of Regents, in the absence of a clear demonstration that the student has established domicile in the State.
4. Any person who remains in this State when the parent, having theretofore been domiciled in this State, removes from this State, shall be entitled to classification as a Florida student, so long as the student's attendance at a school or schools in this State shall be deemed continuous. Attendance at a school or schools in this State shall be deemed "continuous" if the person claiming continuous attendance has been enrolled at a school or schools in this State as a full-time student, as such term is defined by the Board of Regents, for a normal academic year in each calendar year, or the appropriate portion or portions of such years, thereof, since the beginning of the period for which continuous attendance is claimed. Such person need not attend summer sessions or other such intersession beyond the normal academic year in order to render attendance "continuous".

Appeal from a determination denying Florida status to any student may be initiated by the filing of an action in court in the judicial district in which the institution is located.

Any student granted status as a Florida student, which status is based on a sworn statement which is false, shall, upon a determination of such falsity, be subject to such disciplinary sanctions as may be imposed by the President of the University, which sanctions may include permanent expulsion from the State University System or any lesser penalty.

NOTE: A student who initially registers as a non-Florida resident, but subsequently changes to Florida residency, must indicate this change prior to the academic quarter he or she wishes to be considered a Florida resident. All changes of residency are to be made in the Office of Admissions and Community College Relations.

**SPECIAL CATEGORIES**

The following categories shall be treated as Florida residents for tuition purposes:

1. Military personnel of the United States of America on active duty and stationed in Florida, including dependent members of their immediate families.
2. Veterans of the United States of America retired with twenty (20) years or more of active military service, including dependent members of their immediate families, who are in Florida at the time of retirement, or who move to Florida within one year following retirement and intend to make Florida their permanent home.
3. Full-time elementary, secondary, and junior college faculty members under current teaching contracts in the State of Florida. (This is construed to exclude the spouses of such faculty members.)
4. Full-time faculty and career employees of the University System and members of their immediate families. (This is construed to exclude the spouses of students.)
5. Students selected by their respective states for participation in the Southern Regional Education Board academic common market program who are enrolled in programs approved by the Florida Board of Regents.

A student who is in one of the special categories above may change status from non-Florida to Florida resident by presenting to the Office of Admissions and Community College Relations a copy of the *Declaration of Intent* to establish domicile that has been filed with the Clerk of the Circuit Court and the completed and notarized Residency Affidavit Form. To claim the military exception, the student must furnish the Office of Admissions and Community College Relations a copy of the military orders showing assignment to Florida. A public school official must submit a written statement from the applicant's superior as to the applicant's public school status. A University employee must submit a statement from the Personnel Office as to the applicant's employment status.

# STUDENT SERVICES

The Division of Student Services exists to facilitate your receiving services needed to successfully complete your education, to advise you (and possibly advocate for you) should you experience any difficulties while you attend Florida International University, and to grow in its responsiveness as a result of the interaction with you. The Division of Student Services is located on the 2nd and 3rd floors of University House. The following paragraphs list some of the services available to you through this Division. If one of your needs is not covered below, please come to the Division Office Room UH 340 for personalized assistance, or call 552-2421.

## UNIVERSITY HOUSE

University House is the primary student center and provides a focal point for the University community to meet and interact in a non-classroom, yet educational environment. As the hub of student life, the facility houses the bookstore, cafeteria, Rathskeller, Cinema Center, International Conference Theater, Publications/Communications Workroom, recreation rooms, TV lounges, Student Government Association offices, student organization offices, and meeting rooms. The Student Activities Office is located on the second floor. The Division of Student Services, which includes Career Planning and Placement, Cooperative Education, Foreign Student Services, Financial aid (until Summer Quarter 1976, thereafter on the first floor of Primera Casa), Veterans Affairs, and the office of the Dean, is on the third floor.

## STUDENT ACTIVITIES AND ORGANIZATIONS

Student activities are integrally designed to meet the varied needs and potentialities of Florida International students. Student activities programming is co-curricular and extends the educational spectrum from the classroom into the work of student organizations, Student Government, and a myriad of events and activities carried on throughout the year. Participation in student activities allows a student to gain the broadest possible scope of education during the time that he or she is at the University.

Organizations are continually being formed. Students have the opportunity to develop groups that further social and service programs, promote and supervise student welfare, further educational goals, and coordinate and implement community/student cooperation. The Student Activities Office in the Division of Student Services, University House 211, will provide further information if students are interested in organizing a group or joining one that exists.

There are currently over 60 registered student organizations on campus, ranging from the Professional Commerce Association, the Council for Exceptional Children and the Student Art Association, through the Pre-med Society, the International Student Club and the Sailing Club. Meetings for all student groups are posted on glass directory boards and tackboards throughout the University. The Student Activities Office also has a master schedule of student meetings.

## STUDENT PUBLICATIONS

The Student Publications/Communications Workroom, University House 212A, provides the base of operations for all present student publications as well as any other communicative instruments that students initiate. In furthering the University's philosophy of linking practical experience with theory, student communications provide the opportunity for students to gain journalistic experience outside the classroom. A registered independent campus newspaper and several registered magazines do exist on campus. Student publications welcome contributions from any segment of the University community and seek staff members as well.

## STUDENT GOVERNMENT

The Student Government Association (SGA), with offices in University House 310 and 311, actively represents the student body within the University community. One of the functions of the SGA is to place all interested students on university-wide

committees and task forces to insure student representation. Three of the most vital SGA standing committees are the Cultural and Social Committee, which is in charge of coordinating all concerts, lectures, film series and cultural and social activities involving students; the Budget Committee, which quarterly reviews and funds budget requests from registered student organizations and university departments; and the Committee on Committees, which reviews and screens student applicants for university-wide committees and recommends them to SGA for approval.

## GOVERNANCE

Students at Florida International are encouraged to participate in the governance of the University. The essential thrust of the University's philosophy is to provide an effective governance program that truly represents the students, the faculty and the staff in developing the institutional policies.

The governance of Florida International is intended to reflect common goals, and to bring honest differences of opinion out into the open when such exist. Through coordinated action and cooperation, the ingenuity of students can be an effective force in serving the total University community. The students' concerns will be considered within the framework of the total governance of the University because students have the right to be represented on all major University governing councils and committees.

Faculty and staff of Florida International actively seek to learn students' desires and needs, which receive major consideration in the decision-making process at the University. At the same time, to enhance "two-way" communication, it is important that students also give consideration to the views of faculty and staff as the "University family" works together to meet the basic goals of the institution.

The elected Student Government Association is one of the four Senates in the University Council, the primary governance unit of the University.

## STUDENT HEALTH CARE

The health services at Florida International are designed to supplement the normal health care of our totally non-resident population and are adequately prepared to provide emergency health care for anyone becoming injured or ill while on campus.

Our emergency health clinic on campus is staffed by a registered nurse from 8:00 a.m. to 11:00 p.m., Monday through Thursday, 8:00 a.m. to 9:00 p.m. on Friday, and 24-hour emergency medical services are available through a medical clinic near the campus. The clinic is located in Room 304 in Primera Casa.

Upon annual ratification by SGA all students paying for nine or more CREDIT hours per quarter are automatically covered with a $1,000 blanket accident insurance policy upon payment of their fees. Other students may purchase this coverage at a nominal fee. A student can elect additional personal insurance coverage at low group rates through the Student Health Insurance Program. Options include a $2,500 major medical accident and illness coverage, and a maternity benefit clause. Information regarding this coverage will be mailed to the student after he or she enrolls in the University, or the student may contact the Health Clinic on campus.

## HANDICAPPED STUDENTS

Special arrangements have been made at Florida International to serve the needs of those who have physical handicaps. Buildings include elevator and ramp facilities as stipulated by federal regulations for the handicapped, as well as special restrooms, lowered drinking fountains and telephones, and a special parking area. The Division of Student Services (UH 340) is the focal point for the expression of concerns regarding campus matters for all handicapped students.

## FOOD SERVICE

Food and beverage service is available on the first floor of University House. Snacks and complete meals are served cafeteria style. The cafeteria includes tables in the main area, surrounded by small dining rooms and patio dining areas. Food Service offers complete catering service.

## COOPERATIVE EDUCATION

Cooperative Education is an educational arrangement which is intended to augment a student's education by adding the dimension of alternating quarters of classroom study with quarters of full-time employment in a position directly related to the student's major field of study. Interested students may obtain detailed information about Cooperative Education from their academic advisor or the Department of Cooperative Education.

## CAREER PLANNING AND PLACEMENT

The Career Planning and Placement Department is available to help students and alumni with their career-life planning. In addition, the Department also assists individuals in locating the most advanced positions for which they are qualified, as well as providing alumni with the opportunity to review their career options and make critical career decisions with the help of a professional counselor. These programs are supported by a number of services: one-to-one counseling, group guidance in the form of seminars (e.g. interviewing techniques, resume and letter-writing), on campus recruiting of students by employers, and full-time and part-time vacancy notices. In addition the Department houses a career information library, directories of potential employers, and a supply of employment applications for various school systems and industries. The Department also provides assistance to students and alumni in establishing a centralized credential file of personal data, transcripts, and references for referral to prospective employers.



## FINANCIAL AID

Florida International University subscribes to the philosophy that a student is entitled to a college education regardless of his or her financial condition. The Office of Financial Aid has an extensive program of student financial aid which includes scholarships, grants, loans and employment. Awards are based on need. Each application is given individual attention.

Assistance may be in the form of a scholarship, loan, part-time employment or a combination of all three in a "package". Florida International participates in the National Direct Student Loan Program, the Florida Student Loan Program, the Federal Nursing Student Loan and Scholarship Program, the Law Enforcement Education Program, the College Work-Study Program, the Florida Student Assistance Grant Program, the Supplemental Education Opportunity Grant Program and the Basic Educational Opportunity Grant Program. Forms for the Federally Insured Loan, a type of transaction between local lenders and the student, are also processed through the Office of Financial Aid. Interest rates vary, and most loans are repayable starting six months to a year after graduation or withdrawal from an institution of higher education.

In order to qualify for aid, a student must be degree-seeking. A new application for aid must be submitted each year. Forms are available in February for the following Summer Quarter and academic year. A student enrolling in the Summer and Fall is strongly encouraged to apply between February 1 and May 1 in order to receive priority consideration. Apply as soon as possible. *DO NOT* wait until you have been accepted by the Admissions Office. A student starting at Florida International University in the Winter Quarter should apply during the previous October. Before a financial aid application can be evaluated, students are expected to do the following:

1. Complete a Parents Confidential Statement (PCS) or a Student Financial Statement (SFS) which is mailed directly to the College Scholarship Service. The Student must complete a PCS if during the preceding 12 months he or she resided with, was claimed as a dependent for federal income tax purposes, or received $600.00 or more from one or both parents or legal guardian. The College Scholarship Service will send Florida International University a computerized version of the student's application which is evaluated to determine his or her need.
2. Complete an office application and mail it to the Financial Aid Office.

3. Every transfer student must complete the financial aid transcript form (Section A-C) available at Florida International University's Financial Aid Office, and have their Financial Aid Office complete Section D and mail it to Florida International University.

If a student is dependent and his or her family's gross income is less than $15,000.00 or if he or she is an independent student and his or her gross income is less than $15,000.00, the student is expected to do the following, assuming he or she meets the basic qualifications of the programs:

1. Apply for the Florida Student Assistance Grant Program. The student must be a United States citizen and a Florida resident for at least 24 months immediately preceding the beginning of the academic year for which he or she is applying. The student must be enrolled for at least 12 hours per quarter.
2. Apply for the Basic Economic Opportunity Grant (BEOG) Program and submit the Student Eligibility Report to Florida International University. In order to be eligible the student must have started his or her post high school education after April 1, 1973. The student must be enrolled for at least 6 hours per quarter.

Awards may be adjusted if the income of the student changes. Applicants who fail to notify the Financial Aid Office of assistance from other sources are subject to complete withdrawal of aid.

Please note that the opportunities for financial assistance are limited if a student is not a resident alien or a United States citizen.

## VETERANS PROGRAMS AND SERVICES

The Office of Veterans Programs and Services in the Division of Student Services is a focal point for Veterans to receive advice and referral services regarding academic and administrative questions. The office also facilitates concerns regarding veterans educational benefits, including tutoring provisions. In addition, the Office of Registration and Records provides facilities and support for a Veterans Administration representative on-campus and a V.A. Clerk for certification purposes.

| *Veterans Benefits* | *Undergraduate* | *Graduate* |
|---|---|---|
| Full Time Allowance | 12 quarter hours | 9 quarter hours |
| ¾ Time Allowance | 9 quarter hours | 7 quarter hours |
| ½ Time Allowance | 6 quarter hours | 5 quarter hours |

## FOREIGN STUDENT SERVICES

The Department of Foreign Student Services is organized to meet the special needs of foreign students and to help each student achieve his or her educational goals. The Department is a source of information and liaison for immigration responsibilities, financial aid, referral services and other questions concerning the general welfare of foreign students. The counselors serve as advisors, friends, and advocates for foreign students, helping students understand the law and receive fair treatment. An orientation program is planned at the beginning of every quarter to acquaint the new foreign student with the University, Immigration Regulations and the community.

## COUNSELING SERVICES

A variety of special advising and counseling is provided by a range of qualified professional staff to aid any student experiencing difficulty with career choice and/or personal growth. Individualized assistance in this area is provided for foreign students, veterans and the handicapped. To supplement the on-campus professional staff, off-campus psychological counseling services are available at no cost to the student.

## CAMPUS MINISTRY

Campus Ministry serves as a center for student groups on campus involved in a variety of religious activities. Chaplains representing various faiths are available for

personal appointments. The Campus Ministry office is located in Primera Casa 233. The office is open Monday through Friday from 9:00 a.m. to 5:00 p.m. and evenings as posted.

### ORIENTATION

The various academic departments and schools may hold individual orientation programs for their students. Students will be notified by the departments of these sessions.

### HOUSING AND TRANSPORTATION

Florida International does not provide on-campus housing but does assist students in locating housing. For lists of available housing, a student should contact the Division of Student Services.

There is ample on-campus parking space for automobiles with the purchase of a permit, and bike racks are available for securing bicycles. In addition, connecting bus service to the campus is provided by the Metropolitan Transit Authority.

## ADMINISTRATIVE AFFAIRS

The Division of Administrative Affairs provides several types of administrative services through its nine offices to assist with the planning and functioning of University programs. Auxiliary Services coordinates the University role in food service, bookstore, and duplicating. The Budget Coordinator prepares annual operating and legislative budgets. Campus Safety coordinates safety services. The Controller records and reports all financial data of the University. Personnel serves employee needs. Physical Planning coordinates space provisions. Physical Plant operates all utilities systems; maintains and repairs all buildings and utilities; and provides groundskeeping, custodial, vehicular, telephone and special event set-up services. Purchasing arranges for the purchase and maintenance of supplies and equipment and provides storage space.

### DIVISION OF ATHLETICS

Recognizing that intellectual growth and physical activity are integrally related in the total development of the individual, the University provides opportunities for the student to participate in a wide variety of physical activities. The Division of Athletics offers programs in 4 areas:

- *INTERCOLLEGIATE ACTIVITIES* — the University participates in 5 NCAA sponsored intercollegiate sports for men (soccer, wrestling, baseball, golf, tennis) and 5 intercollegiate sports for women (volleyball, softball, basketball, golf, tennis).
- *INTRAMURALS* — touch football, softball, basketball, volleyball, badminton, table tennis, handball, golf, tennis, horseback riding, track and field, and wrestling.
- *CLUB SPORTS* — lacrosse, basketball, judo, fencing, bowling, sailing, Karate, dancenastics, weightlifting, jogging, rowing, and scuba diving.
- *RECREATION ACTIVITIES* — facilities are available on campus for tennis, outdoor handball, paddleball, physical conditioning, wrestling, pitch and putt golf, and other recreational activities. Off-campus facilities are available for bowling, golf, and swimming.

## COMMUNITY AFFAIRS

In today's world, instruction and research are not confined to the campus classroom or laboratory. Such off-campus activity requires specialized administration. At Florida International, these non-traditional activities are brought together in the area of Community Affairs.

This area also embraces a non-academic operation, the vital communication and support link between the university and the community.

## STATE UNIVERSITY SYSTEM EXTERNAL DEGREE PROGRAM

The Florida Board of Regents has authorized the School of Independent Studies at Florida International University to administer the State University System's External Degree Program. This statewide authorization enables students to take advantage of all educational resources throughout Florida, without requiring residency on any campus. It is a self-directed, non-residential program for residents of the State of Florida.

Individual study plans are designed for each student in the form of an Educational Contract. In the Contract, the student is awarded credit for previous academic experience and for previous work and other life experiences. The Contract also specifies the program of study outlining what remains to be done for the completion of a baccalaureate degree. Students may enroll in the program and begin their course of study at any time. The length of time required for each student will vary according to the amount of credit needed for completion and the speed with which the individual student wishes to work.

### PROGRAMS OFFERED

The External Degree Program is operated through the faculty of the regular departments and divisions in Florida International's college and schools. The degrees offered are the same degrees as the regular degrees offered by the college and the schools, but they are achieved through alternative means. All degrees offered by the College of Arts and Sciences, the School of Health and Social Services, the School of Technology, the School of Business and Organizational Sciences, and the School of Hotel, Food and Travel Management may be earned through the External Degree Program.

### CREDIT FOR LEARNING FROM WORK AND OTHER LIFE EXPERIENCE

Many persons have accumulated non-college experiences that can be translated into college credit. By various methods of evaluation, our faculty is able to assess a student's competence level and grant advanced standing accordingly. Methods of evaluation range from the standardized College Level Examination Program (CLEP) to individual written and oral presentation before persons with established credentials in the disciplines. There is no minimum or maximum number of credits the faculty may award.

Examples of work and other life experiences which may be considered for credit are: In-service training, short courses, continuing education, correspondence studies, seminars, travel, and professional occupational experiences.

### INDEPENDENT STUDY — NON-RESIDENTIAL WORK

Although most External Degree students take some formal classroom work as part of the Educational Contracts, classroom instruction is not required. When it is clear that classroom work is unsuitable or impossible for a particular student, arrangements for Independent Study, conducted at home or on the job and off of any university campus, are worked out through reading lists, research papers, and educational projects.

Entrance Requirements

1. Florida Residency.
2. Completion of two years of college studies or the equivalent.
3. Commitment to independent study.
4. Submission of detailed application forms.
5. Acceptance as an External Degree student by a faculty adviser.
6. An initial interview of approximately one half day.

**Fees**

Charges are listed under fee section of catalog.

**Financial Aid**

The External Degree Program has been approved for scholarships, loans, and Veterans benefits. For detailed information, contact: Student Financial Aid.

## FAU-FIU JOINT CENTER FOR ENVIRONMENTAL AND URBAN PROBLEMS

The establishment in July 1972 of a Joint Center for Environmental and Urban Problems by Florida International University and Florida Atlantic University was based on the premise that many of South Florida's urban and environmental problems must be approached on a regional basis; that they know no political boundaries. The Joint Center Headquarters, which houses the office of the Director, is situated in Fort Lauderdale with branch offices on the FIU and FAU campuses. The FIU office is staffed by an assistant director and research associates.

In the next decade, decisions must be made on such critical areas as transportation, pollution control, land use, housing, and the design of a regional government system capable of effective problem-solving. As a catalyst in coordinating and supporting private and public efforts to solve some of these problems, the Joint Center concentrates on both research and service responsibilities.

### RESEARCH

Applied research grants are awarded each year by the Joint Center to faculty of both Florida Atlantic University and Florida International University to do research on those environmental and urban problems of current concern in the South Florida area. Besides this supported research at the universities, "in-house" research projects are conducted at the Joint Center Office in Fort Lauderdale.

Supported research projects funded by the Center cover many varied areas. Examples of funded projects are: noise pollution, fire and rescue study, elemental analysis of air and water samples in Dade and Broward counties and juror selection.

Research results, produced at the Joint Center and elsewhere, are made available to public and private agencies attempting to find and apply solutions to urban and environmental problems.

### SERVICE

As a service organization, the Center provides professional assistance, maintains inventories of needs and scientific manpower availabilities, disseminates information, and facilitates communication among groups concerned. The Joint Center publishes a bi-monthly magazine, *Florida Environmental and Urban Issues;* and a Spanish language edition: *Estamos Destruyendo Nuestro Futura? — Series "Florida 2000".*

Special effort is concentrated on providing services to the executive and legislative branches of state government since they are the key element in the solution of urban and environmental problems which increasingly have a regional character.

Citizens' groups are generally over-supplied with ideas and imagination, and grossly under-supplied with facilities and mechanical assistance. Their need for assistance in identifying problems or proposing solutions is minimal as they are presently the major source of our awareness of environmental and urban problems. They do, however, greatly need facilities for communicating with each other and with government and para-government agencies, for identifying other interested individuals, and for gaining information for more effective action. The Center is charged with looking to all these needs.

## DIVISION OF CONTINUING EDUCATION AND SPECIAL PROGRAMS

The Division of Continuing Education and Special Programs increases the range of educational opportunities available to the community in several ways. Intensive

short-term and long-term experiences, credit and non-credit, are provided for professional, para-professional, and lay persons in their efforts to stay abreast of the latest developments in their fields of interest. Action forms of community service are offered by the Division as community issues and needs are identified. Examples of such programs are: International Seminar on Lower Cost Housing Production, The New U.S. Economy: Challenges and Opportunities, and Social Work Licensure Forum.

### DEPARTMENT OF CONFERENCES AND SHORT COURSES

The Department provides conferences, seminars, workshops, and short courses, to individuals and groups in their quest for lifelong learning. All activities are planned and designed to meet specific community clientele interests and needs.

Program participants are awarded the CEU (Continuing Education Unit) as a measure of their participation in non-credit activities. The record of CEU units earned is maintained for individual participants by the University Registrar.

### DEPARTMENT OF OFF-CAMPUS CREDIT COURSES

The Department serves various community audiences throughout Dade, Broward, Monroe and Collier counties by identifying various needs and by coordinating the appropriate University sources toward meeting these needs with credit courses and programs offered at convenient locations throughout the service area. Groups served include personnel in public schools, business and industry, government and hospitals, as well as a large variety of other groups.

### INSTITUTE FOR WOMEN

The Institute presents conferences, programs, courses, seminars, and workshops on issues of particular interest to women. It encourages women to take affirmative action on their own behalf. The Institute brings community representatives together to design and conduct their own educational programs, to prepare for re-entry into the work force or formal educational systems, to develop their management skills, and to investigate opportunities for fulfillment and self-improvement through purposeful volunteer activities in the community.

### REAL ESTATE INSTITUTE

The Institute offers credit and non-credit courses and seminars for persons seeking entry or already engaged in the real estate business. Several short courses such as: Principles and Practices, License Law, Mortgage Lending and Apartment House Management are offered on a non-credit basis. Basic study is given toward preparation for a real estate salesperson or brokers license. A program of courses is also offered leading to a Certificate in Real Estate.

### INTERNATIONAL INSTITUTE FOR CREATIVE COMMUNICATION

The Institute encourages creative communications in all academic disciplines by offering programs and activities in the areas of multi-media teaching techniques and educational theories in relation to creative communication.

## OFFICE OF FEDERAL LIAISON AND LABOR AFFAIRS

The Office of Federal Liaison and Labor Affairs provides articulation with Federal and State agencies on the nature of the higher education resources available at the University for public service activities. Such activities include development of resources for the University to conduct research, training, exchange, special degree programs, and evaluation studies, as well as short term seminars and workshops.

This office also supervises and coordinates the statewide Institute for Labor Research and Studies.

### INSTITUTE FOR LABOR RESEARCH AND STUDIES

The Institute provides educational services, with or without academic credit, in the areas of labor and manpower studies, labor relations for management and union

groups, and collective bargaining, throughout the State of Florida. The Institute maintains an applied research program designed to support instruction and consulting in the above areas. In cooperation with the External Degree Program, the Institute sponsors an external baccalaureate degree in Labor and Manpower Studies.

## DIVISION OF UNIVERSITY RELATIONS AND DEVELOPMENT

### DEPARTMENT OF ALUMNI AFFAIRS

Although the University is new, over six thousand have already joined the ranks of our graduates and nearly 30,000 citizens have taken courses at the University. This new department is initiating a wide range of services, activities and communications to benefit our alumni.

### DEPARTMENT OF DEVELOPMENT

The Department of Development encourages contributions of financial resources for the advancement of the University from national and local non-governmental sources. The "margin of excellence" that distinguishes a great university from an adequate university is encouraged and provided through the activities of the following groups:

THE FLORIDA INTERNATIONAL UNIVERSITY FOUNDATION, INC., is composed of business and professional leaders of the community who have dedicated themselves to furthering the University by encouraging, soliciting, receiving and administering donations for the benefit of the institution.

VIVA LAS ARTES was established to encourage interest and support in the fine arts programs of the University. Persons from the Greater Miami area seek funding for student financial aid and the betterment of the cultural arts.

THE SUNBLAZERS CLUB seeks student financial aid and support for the athletic programs of the University with the goal of providing a superior sports and recreation program for University students.

The Division of University Relations and Development fosters communication and cooperation between the community and the University through its several areas of activity of its four departments below. The Division also facilitates the coordination of all major special events and acts as a communications link with all university and community boards.

### DEPARTMENT OF INFORMATION SERVICES

This Office informs the various publics and personnel of the University about the variety of activities and happenings of interest to them through

- News releases prepared for the mass media
- Blue Bulletin, a weekly University announcement sheet
- The Speakers Bureau that arranges for University personnel to address requesting groups on topics of interest

### DEPARTMENT OF PUBLICATION SERVICES

This Department produces or coordinates the preparation of hundreds of publications which convey information about University programs, services and activities to special audiences among the general public, the community at large, and the University community.

- The *Ivory Tower* weekly University newsletter which is distributed internally and externally is one of the many publications prepared by this office.
- *Output* is the quarterly newsletter distributed to graduates prepared jointly by this department and Alumni Affairs.

## ACADEMIC AFFAIRS

Florida International University provides many supportive services to assist the entire University community — students and staff — meet ongoing academic and business needs.

## INTERNATIONAL AFFAIRS CENTER

The prime function of the International Affairs Center of Florida International is to assist all elements of the University in acquiring an international dimension, whether it be in Florida or abroad, curricular or extra-curricular.

It has become traditional for like centers in other universities to create separate staffs and projects which remain on the periphery of student and faculty concerns. Florida International's non-traditional approach seeks total immersion of the University in international affairs. The goal is to make the University an international center. To achieve this, the staff of the Center serves alternately as advocate, lobbyist, convener, planner, broker and fund-raiser.

A principal premise upon which the Center operates is that the most valid international activities are those which are multi-disciplinary. For the Center's purposes, multi-disciplinary means that not only are both faculty and students to be brought in, but community groups and resources as well. Priority emphasis is given to those activities where two or more schools or departments of the University can be involved.

If there is one broad discipline around which the University's internationalism clusters it is the institution's relationship with international students. The Center assists all elements of the University in seeing that the international student feels welcome at Florida International.

The Center aids all parts of the University in the research of the practical problems which face the international community.

The promotion of faculty and student travel and study abroad is also a function of the Center. In this regard, the Center acts as a clearing house for programs sponsored by the University as well as for those sponsored by such organizations as the State University System, American Association of State Colleges and Universities, and the International Institute of Education.

## LIBRARY

The Library is housed in the Athenaeum, the newest of the University's buildings on the Tamiami Campus.

Some 250,000 volumes comprise the Library collection, in addition to substantial holdings in federal, state, local, and international documents; maps; microforms; music scores; newspapers; institutional archives; and curriculum materials. The Library subscribes to approximately 3,700 scholarly journals and other serials.

The public card catalog, located in the Reference Department, is divided into three sections for author, title, and subject entries. The location of the resources is given on the cards in each of the three sections of the catalog. The bulk of the collection is housed in open stacks.

Classification of Library resources is according to the Library of Congress system except for the depository collection of U.S. government publications, which is arranged by the Superintendent of Documents classification. A separate public catalog is maintained as the key to Library holdings of government documents.

In keeping with the University's commitment to day-night operations, the Library is open when the University is in session and during vacation periods. For exact Library hours, please consult the posted schedules. The Library's facilities are available to residents of the area as well as to all members of the University community.

## MEDIA CENTER

The Media Center, a service facility to faculty, staff and students, is located in Viertes Haus and Primera Casa 419. The Film Library is located in the new Library building: Athenaeum. The services offered by the Media Center are provided by the following departments: Film Library, Equipment Distribution, Graphics and Photography, Learning Resources Specialist and a Faculty-Student Production Center.

Faculty may seek assistance in the development of instructional support in any A.V. medium. Film librarians acquire films, audio/video tapes, and instructional kits.

Films, tapes, and kits can be scheduled through Film Library. A Language Lab is also located in this area. The Equipment Distribution Center purchases and maintains all A.V. equipment for the university as well as delivering A.V. equipment to classrooms. Graphic artists and photographers assist faculty and staff in the preparation of desired instructional visual support. A Learning Resources Specialist is available for consultative and production support. Faculty and students may prepare graphic materials in the Faculty-Student Production Center with the assistance of an Audio-Visual Specialist.



## SOUTHEAST REGIONAL DATA CENTER

To provide the most readily accessible computer support, resources from Florida International University and Florida Atlantic University have been pooled into a single Data Center for computer services. The Center, which was the first of its kind in Florida, has been charged with extending instructional, research, and administrative computing support to both universities. The pooling of resources has enabled the Data Center to provide far more computing power to both universities than either university could have supported individually.

An extensive library of programs is available to all Data Center users. This library includes programs for simulation, linear programming, statistical analysis and decision-making games, and is accessible from either batch or demand mode of operation.

A staff of support personnel is available to assist students and faculty in the use of interactive (demand) terminals, batch facilities and the software library, and for general problem-solving associated with their use. The same personnel also conduct short courses on the use of the programs in the software library.

## OFFICE OF MINORITY AFFAIRS AND WOMEN'S CONCERNS

The Office provides leadership and direction in the administration of the University as equalization programs for women and minorities in several ways. It assists University units in implementing and monitoring affirmative action-procedures, provides a channel for employee and student grievances regarding discrimination or issues that indicate the need for additional affirmative action, and promotes effective relationships between the University and community organizations.

## OFFICE OF INSTITUTIONAL RESEARCH

The Office conducts the research and evaluation related to the internal operations of the University, and analyzes and reports University statistics to federal and state agencies and other relevant groups.

The Office publishes a variety of reports on a regular basis. Those with widest applicability deal with student characteristics and student enrollments, both actual and projected.

The Office has the responsibility of overseeing the quality of questionnaires which are distributed within the University and provides support services for those conducting studies.

Additionally, through the use of an on-site demand terminal and special data files created for its use, the Office responds to ad-hoc requests for information from University committees, individual faculty members, administrators and students.

## DIVISION OF SPONSORED RESEARCH AND TRAINING

Sponsored Research and Training involves programs executed by University employees using University facilities and financed by contract payments, grants, or gifts from any source.

# COLLEGE OF ARTS AND SCIENCES

The College of Arts and Sciences is a Liberal Arts College. As such, it furthers the study of fundamental intellectual disciplines and renders service to the professional schools.

The Administrative units of the College offer departmental programs of study leading to bachelor degrees in biological sciences, economics, English, fine arts, (art, music, theatre), history, international relations, mathematical sciences (mathematics, statistics, computer science), modern languages (French, German, Italian, Portuguese, Spanish), philosophy/religion (philosophy and/or religious studies), physical sciences (physics, chemistry, earth sciences, environmental studies), political science, psychology, and sociology/anthropology.

The College also offers collegiate programs of study leading to bachelor degrees in humanities, liberal studies, and social sciences. Students may earn certificates, authorized by the College, in Black Studies, Caribbean Studies, Jewish Studies, Latin American Studies, and Consumer Affairs.

As part of the conditions for a bachelor degree the College requires that at least ten (10) quarter hours of elective credit stipulated in each academic major program be earned through course work taken outside the department sponsoring the program. Moreover, students are encouraged to consider the possibility of taking a minor besides their major, in order to enhance the liberal quality of their education.

## ADMISSION

A student holding an Associate degree from a community college (or having completed the equivalent course work at a four year school) will be admitted to the program of his or her choice. The College will also serve students who need to complete general education requirements or certain other requirements in order to enroll in specific discipline or professional programs.



## ANTHROPOLOGY MAJOR

Anthropology is part of the Department of Sociology and Anthropology and all information should be obtained from that department's office.

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

Ninety quarter hours (60 semester hours) or the Associate of Arts degree from a community college (work should be pre-Arts and Sciences), or pre-Anthropology or Sociology if such programs exist. If the student does not have an AA degree, his background must reflect an ability to handle advanced academic work.

*Required Courses:* introduction to cultural anthropology, or introduction to physical anthropology, or introduction to sociology.

*Recommended Courses:* (1) other anthropology courses, (2) ecology, economics, geography, history, political science, psychology, (3) arts, biology, English, foreign language, mathematics, philosophy.

UPPER DIVISION PROGRAM:

| | | *Quarter Hours* |
|---|---|---|
| *Required Courses:* | | **60** |
| *Core Courses:* | **20** | |
| ASC 301 Anthropological Theories | 5 | |
| ASC 302 Sociological Theories | 5 | |
| ASC 303 Research Methods | 5 | |
| ASC 304 Ethical Issues in Social Science Research | 5 | |
| *Area Courses:* either Anthropology or Sociology | **40** | |
| *Electives:* with the approval of the faculty advisor | | **30** |
| | | **90** |

NOTE: A student with special interests may consult faculty advisors to plan an individualized program of study.

*Field Work Experience* — A meaningful understanding of anthropology and sociology can best be developed through the interplay of theory and research. Each student will be encouraged to work outside of the formal classroom under faculty supervision.

## MINOR IN SOCIOLOGY/ANTHROPOLOGY

*PRESCRIBED COURSES:* 25 credits in the Department of Sociology/Anthropology including the following:

2 courses chosen from among the four core courses required of departmental majors (ASC 301 Anthropological Theories, ASC 302 Sociological Theories, ASC 303 Research Methods, ASC 304 Ethical Issues in Social Science Research).

## COURSE OFFERINGS

ASC 301 ANTHROPOLOGICAL THEORIES (5) This course examines the process of theory building and explanation in the social sciences and outlines the historical and philosophical foundations of anthropological thought. Theorists and schools of thought reviewed include Darwin and evolution, Boas and historical particularism, Freud and culture and personality, and Malinowski and functionalism.

ASC 302 SOCIOLOGICAL THEORIES (5) Examines the emergence of sociology as the study of social relations. Compares and contrasts the work of selected theorists with respect to their methodologies, treatment of the emergence and consequences of modern society, political sociology, conception of social class and analysis of the role of religion in society. The student is expected to gain in-depth knowledge of opposing theories as well as an appreciation of the contingent nature of sociological theories.

ASC 303 RESEARCH METHODS (5) An introduction to the scientific method and its application to anthropological and sociological research. Topics include formulation of research problems, research design, field methods and collection of data, hypothesis testing and interpretation of results.

ASC 304 ETHICAL ISSUES IN SOCIAL SCIENCE RESEARCH (5) An introduction to the problems and possibilities of ethical premises in the perspectives and work of social scientists. Examination of historical interrelationships between moral philosophies and developing scientific methodologies. Analyses of contemporary social ethicists' attempts to assume moral postures while examining social relations. Case studies involving issues such as nation-building in areas of accelerated change including Africa and Asia.

ANT 300 INTRODUCTION TO SOCIAL SCIENCE (5) An introduction to anthropology, psychology, and sociology; a survey of the similarities and differences in history, philosophy, and goals and techniques of research in these disciplines; and a review of modern interdisciplinary efforts.

ANT 301 THE SCOPE OF ANTHROPOLOGY (5) An introductory survey of the major areas of anthropological inquiry, including social, cultural, physical and applied anthropology, as well as archeology and linguistics. An examination of the anthropological perspective.

ANT 302 ORIGIN AND DISPERSION OF MAN AND WOMAN (5) A study of the biological history of man as interpreted through the theory of evolution, anatomy and the fossil record, contemporary population genetics, and the concept of race.

ANT 303 PREHISTORY OF THE AMERICAS (5) Early man in the Americas is examined through archeological record.

ANT 304 MAKERS OF MODERN ANTHROPOLOGY (5) The craft of anthropology is explored through the work and writings of such well-known anthropologists as Ruth Benedict, L.S.B. Leakey, Claude Levi-Strauss, Oscar Lewis, Margaret Mead and Robert Redfield. Designed for non-majors; majors may enroll for elective credit only.

ANT 305 SOCIAL BIOLOGY (5) An examination of the biological bases for human adaptation and sociocultural interaction.

ANT 311 ANTHROPOLOGY OF CONTEMPORARY SOCIETY (5) The application of classical anthropological methods and concepts to the analysis of contemporary American Culture. Investigation of a unique cultural scene will involve the student in field work and the preparation of an ethnographic report.

ANT 313 AGRICULTURE AND SOCIETY (5) An introduction to the role of agriculture in the development of civilizations; comparative agricultural production systems; problems and prospects of agricultural development.

ANT 325 KINSHIP AND SOCIAL ORGANIZATION (5) Topics will include the comparative study of systems of kinship, social organization and politics in preliterate societies. Age and sex differences, division of labor, class, caste, slavery and serfdom will also be explored.

ANT 326 MYTH, RITUAL AND MYSTICISM (5) A survey of anthropological approaches to the study of myth, ritual and mysticism as religious and symbolic systems. The social and psychological functions of myth and ritual in primitive and complex societies will be compared.

ANT 327 PEASANT SOCIETY (5) Comparative study of peasant societies with emphasis on the concepts of folk community, traditional culture, and modernization. Data on peasantry in Latin America and other culture areas will be reviewed.

ANT 328 MOVEMENTS OF REBELLION AND REVITALIZATION (5) Crosscultural study of revolutionary, messianistic, and revitalization movements in tribal and peasant societies. Case materials include Negro slave revolts, cargo cults, and peasant wars of the twentieth century (Mexico, China, Vietnam).

ANT 335 URBAN ANTHROPOLOGY (5) Anthropological study of urbanization and urban life styles with particular emphasis on rural-urban migration and its impact on kinship groups, voluntary associations and cultural values.

ANT 337 CULTURE AND PERSONALITY (5) The relationship between culture and personality; problems of individual adjustment to cultural norms; and current issues in psychological anthropology.

ANT 338 LANGUAGE AND CULTURE (5) An examination of the relationship between language and culture, the implications of language for our perceptions of reality, and the socio-cultural implications of language differences for interethnic relations and international understanding.

ANT 355 MEDICAL ANTHROPOLOGY (5) A survey of basic concepts; examination of preliterate and non-western conceptions of physical and mental health and illness; emphasis on cultural systems approach to the study of illness and health care. Background in biology, medicine, or nursing helpful; instructor's permission required.

ANT 358 HUMAN BIOLOGY AND CULTURAL BEHAVIOR (5) The study of animal social behavior and the relevance of these ethological studies for the analysis of human development and socio-cultural behavior.

ANT 365 CULTURAL ECOLOGY (5) Systems of interaction between man and his environment; the role of social, cultural and psychological factors in the maintenance and disruption of ecosystems; interrelations of technological and environmental changes.

ANT 366 MALE AND FEMALE: SEX ROLES AND SEXUALITY (5) Crosscultural enthnographic data will be utilized to examine the enculturation of sex roles, attitudes and behavior; cultural definitions of maleness and femaleness; and varieties of human sexual awareness and response.

ANT 370 THE INDIVIDUAL IN ANTHROPOLOGY (5) Study of the individual in his sociocultural context, the place of the individual in anthropological theory, and the influence of culture on the individual through the use of biography, autobiography, journals, diaries, novels, and narratives.

ANT 385 UTOPIAS AND INTENTIONAL COMMUNITIES (5) A case study examination of historical and contemporary attempts to develop the "ideal" social setting for human interaction. The community study approach in anthropology will serve as the theoretical basis for this course.

ANT 386 THERAPEUTIC COMMUNITIES (5) Cross-cultural and inter-ethnic analysis of mental health and illness. Analysis of formal and informal community mental health delivery systems with emphasis on clinical, humanistic, and therapeutic modalities.

ANT 400 APPLIED ANTHROPOLOGY (5) The theory and practice of applied anthropology; cultural factors and planned community change; implications of case data for public policy. Emphasis will be placed on the processes of economic development and culture change in developing nations.

ANT 401 EDUCATION AND SOCIALIZATION (5) A crosscultural examination of educational and socialization processes, their functions in the larger society, and the value systems they transmit.

ANT 403 RACIAL AND CULTURAL MINORITIES (5) The study of selected ethnic and cultural groups with particular emphasis on patterns of interethnic and intercultural relationships. Minority groups studied will include Afro-Americans, American Indians, Chicanos, Cubans, women, senior citizens or prisoners.

ANT 405 LAW AND CULTURE (5) A cross-cultural examination of the practical and theoretical relationships between the legal system and other aspects of culture and society.

ANT 411 THE RURAL POOR: MIGRANTS, SHARECROPPERS AND TENANT FARMERS (5) The decline of the family farm and the rise of corporate agribusiness; the life styles of migrants, sharecroppers and tenant farmers; the farm labor movement and farmer cooperatives; government policy and the rural poor.

ANT 412 CULTURE AND POVERTY (5) Cultural patterns among the poor; current cultural models utilized in the study of poverty; and the impact of cultural models on anti-poverty programs and public policy.

ANT 413 WORLD FOOD SUPPLY (5) An examination of world food supply and distribution patterns and problems; comparisons between nutritional standards and human and economic development programs among industrialized and Third World nations are made.

ANT 415 THE ORGANIZER (5) A study of men who have inspired mass organizations and brought about major social and cultural transformations. The organizing styles of Christ, Gandhi, Hitler, Mao Tse-Tung, and Martin Luther King will be examined. The relationship between culture content and organizational symbols will be analyzed.

ANT 418 TRIBAL ART AND AESTHETICS (5) This course deals with the social and cultural context and functions of art in preliterate societies, such as in sub-Saharan Africa, New Guinea, and North America. Topics include wood carving, bronze casting, singing, dancing, drumming, masquerading, theatrical performance and all forms of oral literature.

ANT 420 CULTURES OF THE CARIBBEAN (5) An ethnological survey of native cultures and of the processes of culture contact and conflict in the Caribbean and Circum-Caribbean region.

ANT 421 LATIN AMERICA (5) Native cultures of Mexico, Central and South America; the lowland hunters and gatherers and the pre-Columbian Inca and Aztec Empires; the impact of the Spanish conquest.

ANT 422 CUBAN CULTURE AND THE REVOLUTION (5) Culture history of Indian, African and Spanish populations; the Revolution and traditional Cuban society; and the problems and prospects of the Cuban community in the United States.

ANT 423 AFRO-AMERICAN ANTHROPOLOGY (5) Interdisciplinary study of Afro-American cultures of the New World. Topics include cultural patterning, Black English, ethnomusicology, socio-economic adaptations, black culture and ghetto ethnography.

ANT 424 THE AMERICAN SOUTH: A REGIONAL SUBCULTURE (5) A course designed to provide an understanding of the Southern regional subculture. Discussion topics will include an analysis of the sociocultural characteristics attributed to this region.

ANT 425-426-427-428-429 AREA STUDIES (5) Ethnological survey of selected indigenous cultures. Areas to be studied include: (1) North America; (2) Africa; (3) Asia or Southeastern Asia; (4) China. Topics will be announced and will vary depending on current staff.

ANT 430 MANY MEXICOS (5) An interdisciplinary examination of the major social, cultural, economic and political factors contributing to the transformation from the Aztec Empire to Colonial Society to Modern Mexico.

ANT 431-432-433-434-435 (5) Special courses dealing with advanced topics in the major anthropological subdisciplines: (1) social and cultural anthropology; (2) applied anthropology; (3) physical anthropology; (4) linguistics; and (5) archeology. Instruction by staff or visiting specialists. Topics to be announced. Instructor's permission required. May be repeated.

ANT 437 PSYCHOLOGICAL ANTHROPOLOGY (5) Cross-cultural studies in cognition, possession states, myth making and world view are examined. The interface of anthropology, psychology and psychiatry is reviewed.

ANT 438 AMERICAN INDIAN ETHNOLOGY (5) An examination of the sociocultural patterns of selected American Indian groups as they existed in their indigenous state, prior to European contact.

ANT 439 AMERICAN INDIANS TODAY (5) An examination of the history of the American Indians since European contact, and their socio-cultural patterns as a contemporary American minority group.

ANT 440 THE THIRD WORLD (5) An interdisciplinary, cross-cultural survey of the factors contributing to the emergence of the Third World. Significant political, economic, and pan-national and pan-ethnic coalitions are analyzed.

ANT 450 CULTURE AND CONSCIOUSNESS (5) This course provides an introduction into the anthropological study of certain phenomena of consciousness. There are deep roots for the study of altered and/or higher states of consciousness in anthropology. Topics to be explored will include: vision questing, possession phenomena, trance dancing, glossalalia, curing, shamanism, and meditation.

ANT 455 SPECIAL TOPICS IN MEDICAL ANTHROPOLOGY (5) Special courses dealing with advanced topics including (1) folk medicine and ethnoscience (2) nutritional anthropology (3) anthropology and nursing (4) medical anthropology and the elderly.

ANT 456 HALLUCINOGENS AND CULTURE (5) A crosscultural examination of the political, religious, and socio-cultural factors related to the use of hallucinogens. Case materials from tribal and contemporary societies will be analyzed, including the study of soma, the divine mushroom of immortality of the Hindu Rig-Veda; the Native American Indian peyote cult; shamanism and healing in Latin America; the teachings of Don Juan, a Yaqui sorcerer; and the therapeutic uses of LSD. This course does not focus primarily on drug abuse and rehabilitation although these topics are mentioned within the comparative context of the ethnographic data.

ANT 461 PRACTICUM (5) Permission of the instructor required.

ANT 466 STUDIES IN TRANSPERSONAL PHENOMENA (5) The data on transpersonal phenomena such as psychic healing, trance induction, ESP, and expanded consciousness will be reviewed and related to the cultural settings in which they were collected.

ANT 467 WITCHCRAFT (5) Study of the theories, facts, and fantasies concerning witchcraft in western and non-western society from sociocultural, sociohistorical and socio-psychological perspectives.

ANT 469 ANTHROPOLOGY OF WAR AND VIOLENCE (5)

ANT 470-471-472-473-474 TOPICS IN ANTHROPOLOGY (5) Special courses dealing with advanced topics in the major anthropological subdisciplines: (1) social and cultural anthropology, (2) applied anthropology, (3) physical anthropology, (4) linguistics, and (5) archeology. Instruction by staff or visiting specialists. Topics to be announced. Instructor's permission required. May be repeated.

ANT 475 EXPLORATIONS IN VISUAL ANTHROPOLOGY (5) An examination of the use of film in anthropology both as a method of ethnographic documentation and as a research technique for analyzing non-verbal modes of communication. Documentary films and crosscultural data on paralanguage, kinesics, proxemics and choreometrics will be reviewed and discussed.

ANT 485 CULTURE SHOCK: THE YEAR 2000 (5) An investigation of future patterns of culture; an analysis of the concepts of culture lag, culture change, culture shock and future shock; review of conceptual models of projecting the shape of past-industrial society and the relationship of man to his environment in the year 2000.

ANT 491 DIRECTED INDIVIDUAL STUDY (VAR) Supervised readings and/or field research and training. May be repeated.

ANT 492 DIRECTED FIELD RESEARCH (VAR) Permission of instructor required.

ANT 501 COMMUNITY ACTION RESEARCH SEMINAR (5) Seminar will focus on the application of social science data gathering techniques to the analysis and resolution of community issues such as urban planning, environmental quality, and corporate/consumer accountability. Open to majors only. Prerequisite: ASC 303 or permission of the instructor required.

ANT 522 ANTHROPOLOGY FOR EDUCATORS (5) A course designed to provide educators, particularly at the secondary level, with an overview of anthropology as a discipline; its role in a social science curriculum; methods for designing and teaching anthropology courses; and sources of bibliographic and audio-visual aids.

ANT 555 CULTURAL FACTORS IN HEALTH CARE DELIVERY (5) Topics studied include the varieties of subcultural perceptions of and responses to illness; formal and informal healing systems; the indigent patient; and the design of health care delivery services in a multicultural area. Prerequisite: Medical Anthropology course or permission of the instructor required.

ANT 557 ADDICTS AND ADDICTIONS (5) A cross-cultural examination of the historical, socio-cultural, and pharmacological factors involved in drug abuse and addiction. Various treatment programs are compared and evaluated.

ANT 591 DIRECTED INDIVIDUAL STUDY (VAR) Supervised readings and/or field research and training. May be repeated.

ANT 592 DIRECTED FIELD RESEARCH (Variable) Permission of Instructor required.

# BIOLOGICAL SCIENCES MAJOR

DEGREE: *Bachelor of Science* *Students interested in teacher certification see note on page 5.

LOWER DIVISION PREPARATION:

*Required Courses:* 8 semester hours in *each* of the following areas: general biology, general chemistry, and general physics; 9 semester hours in college algebra, trigonometry, and analytical geometry.

*Recommended courses:* foreign language, calculus, organic chemistry.

*Remark:* 6 semester hours above the introductory level in biology may be counted toward the upper division major.

UPPER DIVISION PROGRAM:

| | | *Quarter Hours* |
|---|---|---|
| *Required courses:* | | 24 |
| BSC 341 Genetics | 5 | |
| BSC 301 Biochemistry | 7 | |
| BSC 302 Molecular Biology | 7 | |
| BSC 401 Developmental Biology | 5 | |
| Biological Sciences Electives* | | 15 |
| CHE 301, 302** | | 14 |
| or one year lecture and laboratory course in organic chemistry. | | |
| Mathematics: one course beyond analytical geometry | | 5 |
| *Electives* | | 32 |
| | | 90 |

*BSC 300, 305, 306, 364, 374, 380 and 480 are not applicable to this requirement.

**Recommended: Che 311, Physical Chemistry for the Life Sciences.

*Remark:* Attendance at departmental seminars for at least one quarter is required from all senior students.

**SPECIAL PROGRAMS**

*Bachelor of Science (with Honors)*

*Requirements:*

a) Admission to Program by permission of the department.
b) Program of study arranged in consultation with faculty advisor.
c) Two quarters of BSC 590.
d) Completion of Undergraduate Honors Thesis

*Pre-Professional Curricula*

Programs of study satisfying requirements for admission to Colleges of Medicine, Dentistry and Veterinary Medicine arranged in consultation with faculty advisor. CHE 311, MAS 301 and BSC 336 are recommended as fulfilling requirements of many professional schools.

*Minor in Human Biology*

Students may elect a minor in Human Biology by selecting four courses from the following list:

BSC 300 Human Biology
BSC 306 Biological Basis of Human Sexuality
BSC 310 General Microbiology
BSC 341 Genetics
BSC 349 Biological Basis of Behavior
BSC 355-356 Human Gross Anatomy
BSC 357 Neuroscience
BSC 374 Foundations of Human Physiology
BSC 451, or BSC 350 and 351 are options for students who desire a more sophisticated course in Human Physiology. There are no prerequisites for BSC 300, 305, 306 and 374.

*Master of Science in Biological Sciences*

Program in preparation.

## COURSE OFFERINGS

BSC 300 HUMAN BIOLOGY (5) Human structure and function with emphasis on aspects that relate to human development, genetics and neurobiology. Their relationship to handicapping conditions with respect to mental retardation and behavioral disorders will be discussed.

BSC 301 BIOCHEMISTRY (5) Introduction to the chemistry of proteins, carbohydrates, lipids and their constituents. Principles of enzymology and metabolism. Prerequisites: CHE 220, 221 (MDCC) or CHE 301, 302.

BSC 301L BIOCHEMISTRY LABORATORY (2) Laboratory to accompany BSC 301.

BSC 301D BIOCHEMISTRY CONFERENCE (2) Discussion, problems and extension of the material covered in BSC 301. Concurrent registration in BSC 301 is required.

BSC 302 MOLECULAR BIOLOGY (5) Nucleic acid chemistry and molecular genetics; biosynthesis of protein and nucleic acids. Core course required of majors in Biological Sciences. Prerequisite: BSC 301 or equivalent.

BSC 302L MOLECULAR BIOLOGY LABORATORY (2) Laboratory to accompany BSC 302.

BSC 305 ISSUES IN BIOLOGY (5) Impact on society of recent developments in biological research. The course provides a general background for the intelligent discussion of problems related to states of disease, senescence and death, control of the growth of the population, genetic engineering and control of behavior.

BSC 306 BIOLOGICAL BASIS OF HUMAN SEXUALITY (5) The physiological development of the human organism as a sexual being will be treated with a review of the psycho-social and psycho-sexual basis of human personality. Patterns of adult sexual behavior will be explored with emphasis on achieving healthy human sexual attitudes.

BSC 308 BIOLOGICAL OCEANOGRAPHY (5) The basic aspects of biological, geological, chemical, and physical oceanographic processes as they relate to marine organisms. Lecture and demonstrations. Prerequisite: 8 semester hours of biology.

BSC 310 GENERAL MICROBIOLOGY (5) Introduction to the principles and techniques of microbiology; genetics, taxonomy, biochemistry and ecology of microorganisms.

BSC 310L GENERAL MICROBIOLOGY LABORATORY (2) Introduction to the principles and techniques of microbiology, genetics, taxonomy, biochemistry and ecology of microorganisms.

BSC 320 TOPICS IN TROPICAL BOTANY (5) Survey of representatives of major plant families of the tropics. Examination of selected adaptive characteristics of plants in the tropical ecosystems. Introduction to spices and economically significant tropical plants.

BSC 329 BIOLOGY OF THE ORCHIDS (5) Examination of classification systems of the major orchid groups. Study of the role of floral morphology, environmental adaptation, and pollinator co-evolution in speciation. Summary of accepted cultural techniques.

BSC 329L BIOLOGY OF THE ORCHIDS LABORATORY (2) Laboratory to accompany BSC 329.

BSC 331 THE INVERTEBRATES (5) Taxonomy, anatomy, development, physiology and ecology of major invertebrate phyla excluding insects. Emphasis on marine invertebrates.

BSC 331L THE INVERTEBRATES LABORATORY (2) Laboratory to accompany BSC 331.

BSC 332 GENERAL ENTOMOLOGY (5) Taxonomy, development, morphology and distribution of insects. Ecology and economic problems. Lecture conference and laboratory.

BSC 334 AMPHIBIANS AND REPTILES (5) Comparative studies in distribution, development, anatomy and physiology of amphibians and reptiles. Lecture, conference, field trips and laboratory.

BSC 335 BIRDS AND MAMMALS (5) Taxonomy, distribution and natural history of birds and mammals. Lecture, conference, field trips and laboratory.

BSC 336 EMBRYOLOGY (5) Animal morphogenesis.

BSC 336L EMBRYOLOGY LABORATORY (2)

BSC 337 TOPICS IN MARINE BIOLOGY (5) Selected problems in the biology of marine organisms. Lecture and field trips.

BSC 338 HISTOLOGY (5) Microscopic anatomy of cells, tissues and organs.

BSC 338L HISTOLOGY LABORATORY (2)

BSC 339 MICROTECHNIQUE (5) Laboratory techniques of preparation and microscopic examination of cells, tissues and organs.

BSC 341 GENETICS (5) Mendelian inheritance and introduction to molecular genetics.

BSC 349 BIOLOGICAL FOUNDATIONS OF BEHAVIOR (5) Biological basis of behavior emphasizing neural and hormonal mechanisms of integrated behavior. Lecture, conference, library or laboratory projects.

BSC 350 HUMAN PHYSIOLOGY I (4-5) Basic facts and concepts relating to the physiology of cells, nervous, muscular and cardiovascular systems with emphasis on regulatory mechanisms and abnormal physiology.

BSC 350L HUMAN PHYSIOLOGY LABORATORY I (1) Laboratory course demonstrating principles in BSC 350.

BSC 351 HUMAN PHYSIOLOGY II (4-5) Physiology of respiratory, gastrointestinal, excretory, endocrine and reproductive systems. Continuation of BSC 350.

BSC 351L HUMAN PHYSIOLOGY LABORATORY II (1) To accompany BSC 351.

BSC 355 HUMAN GROSS ANATOMY I (4) Structure and function of various tissues, organs, and organ systems of the human body.

BSC 355L HUMAN GROSS ANATOMY LABORATORY (2) Dissection of human cadaver material to reveal the relationships of the various organ systems of the body.

BSC 355D HUMAN GROSS ANATOMY DEMONSTRATIONS (1) Demonstrations of the prosected human cadaver.

BSC 356 HUMAN GROSS ANATOMY II (4) Continuation of BSC 355. Prerequisite: BSC 355.

BSC 356L HUMAN GROSS ANATOMY LABORATORY II (2) Continuation of BSC 355L. Prerequisites: BSC 355 and 355L.

BSC 356D HUMAN GROSS ANATOMY DEMONSTRATIONS (1) Continuation of BSC 355D. Prerequisites: BSC 355 and 355D.

BSC 357 NEUROSCIENCE (4-6) Structure and function of the human nervous system. Prerequisites: One course in physiology, plus BSC 355 and 356.

BSC 357L NEUROSCIENCE LABORATORY (2) Dissection and demonstration of the various parts of the human brain.

BSC 360 FUNDAMENTALS OF ECOLOGY (5) The basic principles governing the interaction of organism and environment. Trophic structure and energetics of ecosystems, biogeochemical cycles, limits and controlling factors in organismic distribution and abundance, biological interactions, species diversity, evolution of populations and communities, the impact of man. Lecture and field trips. Prerequisites: One year of biology; basic chemistry.

BSC 362 MORPHOLOGY OF VASCULAR PLANTS (5) A survey of groups of vascular plants emphasizing comparative life histories, vegetative and raproductive structures, and evolutionary relationships.

BSC 362L PLANT MORPHOLOGY LABORATORY (2) Laboratory to accompany BSC 362.

BSC 364 HORTICULTURE (5) Examination of theoretical and practical problems of plant growth and production. Prerequisite: A course in plant sciences or advanced biology (or instructor's permission).

BSC 365 INTRODUCTION TO PLANT PHYSIOLOGY (5) Fundamentals of plant growth considering such topics as growth reactions to environmental stimuli, endogenous growth hormones, and practical modifications of plant life cycles.

BSC 372 INTERMEDIATE HUMAN PHYSIOLOGY (5) Functions of the human body and the physico-chemical mechanisms responsible for each organ's function.

BSC 372L INTERMEDIATE HUMAN PHYSIOLOGY LAB (2) Laboratory course demonstrating principles in BSC 372.

BSC 374 FOUNDATIONS OF HUMAN PHYSIOLOGY (5) Functional survey of the organ systems of the human body. Intended primarily for non-science majors.

BSC 376 IMMUNOLOGY (5) Course required in medical technology curriculum. Lecture and laboratory.

BSC 380 PROJECT LABORATORY (3-8) Independent laboratory study in a project or projects of the student's choice. Registration by consultation with instructor. May be repeated for credit.

BSC 401 DEVELOPMENTAL BIOLOGY (5) Comprehensive survey of principles of development and critical analysis of methods used to study these problems. Core course required of major in Biological Sciences, Prerequisite: BSC 302.

BSC 402 EXPERIMENTAL BIOLOGY (2) Laboratory techniques used in biological research. The specific techniques covered will depend on the field of work of the instructor responsible for the course during a given quarter. May be repeated for credit under different instructors. Prerequisite: Permission of the instructor.

BSC 403 CELL BIOLOGY (5) Structure and function of cellular organelles.

BSC 411 VIROLOGY (5) Principles and methods of study of bacterial, plant and animal viruses. Molecular aspects of viral development, virus pathogens and carcinogens. Lecture, conference and laboratory.

BSC 411L VIROLOGY LABORATORY (2) (W) Laboratory to accompany BSC 411.

BSC 420 PRINCIPLES OF SYSTEMATIC ZOOLOGY (5) A practical and theoretical approach to evolutionary zoology. Prerequisites: 8 semester hours of biology or zoology.

BSC 423 INVERTEBRATE PHYSIOLOGY (5) Lectures treating functional processes in invertebrates from the standpoint of adaptation to their environment and specialization in evolution. Prerequisites: General Biology, Organic Chemistry, Invertebrate Zoology.

BSC 423L INVERTEBRATE PHYSIOLOGY LABORATORY (2) Laboratory study to follow or accompany BSC 423.

BSC 425 COMPARATIVE PHYSIOLOGY I: REGULATION OF INTERNAL ENVIRONMENT (5) Osmotic, gastrointestinal, metabolic, circulatory and respiratory physiology. Prerequisites: general biology and organic chemistry.

BSC 425L COMPARATIVE PHYSIOLOGY LABORATORY I Laboratory course demonstrating principles in BSC 425.

BSC 427 COMPARATIVE PHYSIOLOGY II: NEUROENDOCRINE PHYSIOLOGY (5) Neuromuscular, sensory and endocrine physiology. Prerequisites: General biology and organic chemistry.

BSC 427L COMPARATIVE PHYSIOLOGY LABORATORY II (2) Laboratory course demonstrating principles in BSC 427.

BSC 451 HUMAN SYSTEMIC PHYSIOLOGY (5) Selected topics in mammalian and human physiology, with emphasis on topics of clinical significance.

BSC 480 PROJECT LABORATORY (3-8) Independent laboratory study in a project or projects of the student's choice. Registration by consultation with instructor. May be repeated for credit.

BSC 502/MAS 502 APPLICATIONS OF COMPUTERS IN BIOLOGY (5) Introduction to computer techniques of great relevance to modern Biology and their application to the study of a representative group of biological problems. Prerequisite: MAS 311 or permission of instructor.

BSC 504 CELL PHYSIOLOGY AND BIOPHYSICS (5) Fundamental biophysical properties of membranes; transport of water and solutes across biological membranes; passive and active electrical phenomena in membrane systems. Biochemistry and biophysics of contractile mechanisms. Transfer of information from cell to cell. Bioluminescence. Effects of radiation on macromolecules. Prerequisites: BSC 301, 302; CHE 311 or CHE 321 and 322.

BSC 507 BIOCHEMISTRY I (6) Chemical reactions and macromolecular properties of proteins, nucleic acids and polysaccharides. Genetic and evolutionary aspects of protein structure.

BSC 508 BIOCHEMISTRY II (6) Comparative biochemistry: metabolism and regulation of metabolism in microorganisms, plants and animals, mechanisms of enzyme reactions.

BSC 542 TOPICS IN DEVELOPMENTAL BIOLOGY (5) Molecular and cellular mechanisms in the development of plants and animals.

BSC 545 PHOTOBIOLOGY (5) Study of basic photochemical mechanisms as they occur in molecular biological processes such as plant growth, animal vision and radiation damage.

BSC 545L PHOTOBIOLOGY LABORATORY (2) Laboratory to accompany BSC 545.

BSC 550 ADVANCED NEUROANATOMY (5) Indepth knowledge of the embryonic development, structure and function of the human nervous system with a great deal of clinical consideration.

BSC 560 MARINE ECOLOGY (5) Environmental variations in the oceans, characteristic organisms and ecosystem analysis with particular emphasis on shallow water habitat in the South Florida area. The course will emphasize fieldwork, projects and systematic analyses of ecosystem components. Prerequisites: BSC 308, 331 and 360.

BSC 560L MARINE ECOLOGY LABORATORY (2) Laboratory to accompany BSC 560.

BSC 570 TOPICS IN TROPICAL PLANT SCIENCE (5) (SS) Survey of living materials of at least 50 major tropical plant families. Developmental studies using tropical plant materials are reviewed from both physiological and morphological viewpoints. In addition to lectures in economic botany, field studies of tropical fruit and spice trees are carried out. At least four major tropical ecosystems are analyzed and examined in the field.

BSC 570L TOPICS IN TROPICAL PLANT SCIENCE LABORATORY (2) Laboratory to accompany BSC 620.

BSC 590 SENIOR-GRADUATE SEMINAR (2) Oral presentation of an assigned literature survey by senior and graduate students. Required of candidates in the proposed Honors Program. Registration by letter grade for oral presentation or credit/no credit option by participation and submission of written report.

BSC 601 ENZYME CHEMISTRY (5) Physical and chemical properties of enzymes. Review of modern, analytical technique in measurement of enzymatic reactions. Discussion of selected enzyme systems.

BSC 665 PLANT PHYSIOLOGY AND BIOCHEMISTRY (5) Advanced topics emphasizing on transport, plant hormones, tropisms and photosynthesis. Lecture conference and laboratory.

BSC 680 PROJECT LABORATORY (5) As BSC 380.

# ECONOMICS MAJOR

The major in economics provides the student with an understanding of economic problems and institutions and the analytical tools to apply this knowledge to contemporary problems. The program is designed for the student desiring a career in industry, government, international agencies or teaching, and for those planning professional or graduate study in economics, business, law, public administration, urban studies, or international relations.

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

*Required Courses:* None

*Recommended Courses:* six semester hours in principles of economics; three semester hours in social science; six to nine semester hours in humanities; six semester hours in college algebra and trigonometry; three semester hours in statistics.

*Remark:* The entering student who has not taken Principles of Economics must enroll in ECO 301 during his or her *first* quarter at the University.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Major Required Courses:* | | **45-60** |
| ECO 307 Theory of Price | 5 | |
| ECO 308 Aggregate Economic Analysis | 5 | |
| MAS 321 Calculus for Management and Social Science | 5 | |
| Additional Economic Courses* | | |
| *ECO 301, ECO 305, or ECO 311 *cannot* be included in this grouping | | |
| *Electives:* | | **30-45** |
| | | **90** |

*Remarks:* A student may choose a program in general economics or concentrate in one of the following areas: urban and environmental economics, labor and manpower studies, international economics and development, monetary and fiscal policy. The student should select courses in consultation with an advisor. The student planning graduate study in economics should complete 10 quarter hours of the specified method courses.

| | Quarter Hours | |
|---|---|---|
| *Minor Required Courses:* | | **20** |
| ECO 307 Theory of Price | | |
| *or* | | |
| ECO 308 Aggregate Economic Analysis | 5 | |
| Additional Economics Courses* | 15 | |
| *ECO 301, ECO 305, or ECO 311 *cannot* be included in this grouping | | |
| | | **20** |

*Remark:* Introductory courses in calculus and statistics are strongly recommended for the student minoring in economics.

# COURSE OFFERINGS

ECO 301 ECONOMICS, MAN AND SOCIETY (5) (F,W,S,SS) Relationship of economics to individual and group action. Identification of economic and non-economic objectives and problems. Analysis of economic behavior of individuals, business firms, public agencies, and interest groups. Public issue interpretation in the light of economic theory.

ECO 304 THE POLITICAL ECONOMY OF SOUTH AMERICA (5) A cross-national discussion of political economy of the South American nations, with special emphasis on the larger countries. Attention is given to the role of foreign intervention and dependence and to the different attempt of economic integration. Designed as a basic course to give the student an overview of the political economy of the nations with whom we share this hemisphere.

ECO 305 CONSUMER ECONOMICS (5) Consumer behavior; advertising and other influences affecting demand. Patterns of consumer expenditure, effects of public policy on family incomes and consumption patterns. The consumer protection movement.

ECO 306 MONEY AND BANKING (5) Elements of monetary theory; relationships between money, prices, production and employment; factors determining money supply; history and principles of banking with special references to the United States.

ECO 307 THEORY OF PRICE (5) (F,S) Operation of individual markets; market structure; theory of the firm; theory of production; demand theory; general equilibrium and welfare economics.

ECO 308 AGGREGATE ECONOMIC ANALYSIS (5) (W,SS) Analysis of the measurement, determination, and control of aggregate economic activity; the monetary system in relation to income and employment short-term income fluctuations; long-term growth.

ECO 311 APPLIED MACROECONOMICS (5) (F,S,W,SS) Aggregate economic performance and business conditions analysis. Analysis of the nature and causes of business fluctuations. Economic expansions and stagflation. Public policies for economic stability: fiscal policy, monetary policy and income policy. Sectoral analysis and macroeconomic forecasting.

ECO 312 DEVELOPMENT OF ECONOMIC THOUGHT (5) (W,S) Evolution of economic theory and doctrine. Contributions to economic thought from ancient times to J. M. Keynes; emphasis on institutional forces shaping the continuum of economic thinking.

ECO 313 COMPARATIVE ECONOMIC SYSTEMS (5) (F,S) Analysis of alternative economic systems of the industrialized and emerging nations; emphasis on the comparative study of the capitalist, socialist, and communist economic systems of the modern world.

ECO 316 ECONOMICS OF CENTRAL AMERICA (5) (W) Survey of recent economic history of Central American countries dealing with the institutional background and the structure of current economic activities. Special attention devoted to current problems of economic growth and social transformation.

ECO 319 INTRODUCTION TO ENVIRONMENTAL ECONOMICS (5) (W) Economic principles applied to environmental problems. Relationship of market and nonmarket forces to environmental quality; development of tools for policy analysis.

ECO 320 INTRODUCTION TO URBAN ECONOMICS (5) Study of the urban environment, characteristics and trends. Location behavior of firms and households. Urban financial problems, transportation, and housing.

ECO 321 REGIONAL ECONOMICS (5) The spatial order of the economy. Systems of cities, industrial location patterns, regional land use, interregional income and trade, regional economic expansion, population and migration.

ECO 328 ECONOMICS OF POVERTY (5) Poverty in the United States: its measurement and history. Theory of personal income distribution. Present and proposed policies to alleviate poverty.

ECO 329 ECONOMICS OF RACE AND SEX DISCRIMINATION (5) (S) Economic and non-economic implications of discrimination on the basis of race and sex. Discrimination in the labor and commodity markets. Problems of educational training, unemployment, and personal income distribution.

ECO 403 THE ECONOMIC DEVELOPMENT OF CUBA — PAST AND PRESENT (5) (S) Survey of the Cuban economy under capitalist and Marxist ideologies; emphasis on the transition stage and on current policies of economic and social change.

ECO 408 ECONOMIC INTEGRATION — CARIBBEAN (5) (W) Analysis of the method, meaning and implications of economic integration in the Caribbean area. Designed to enable the student to appreciate the trend toward regionalism and economic cooperation.

ECO 409 ECONOMICS OF THE CARIBBEAN (5) (W) Survey of the economic systems of the major British, French, Dutch and Spanish areas in the Caribbean. Special attention devoted to current problems of economic growth and social transformation.

ECO 410 INTRODUCTION TO ECONOMIC DEVELOPMENT (5) Analysis of institutional and structural factors which determine the course of economic progress in developing countries. Characteristics of less developed areas: agriculture, investment, technology, population, international trade, economic integration.

ECO 411 ECONOMIC PLANNING (5) Analysis of planning methods in Capitalist and Socialist economies. Evaluation of macro and micro economic planning tools (input-output and programming techniques). Theory and practice of economic development planning of agriculture, industrialization, foreign trade and manpower.

ECO 412 RADICAL POLITICAL ECONOMY (5) The relationship between Marxist and orthodox economists. Attention given to the New Left and other current criticisms of capitalist economies; multinational corporate policy, concentration of economic power, income distribution, and Third World development.

ECO 413 THEORIES OF ECONOMIC PROGRESS (5) (F) Dynamics of economic progress and change in industrialized and underindustrialized countries of the modern world; historical theories of growth; empirical case studies; formulation of development projects and programs. (Recommended preparation: ECO 307 or 308.)

ECO 414 ECONOMICS OF TECHNOLOGICAL CHANGE (5) Economic analysis of technological possibilities in the production process and the estimation of production and cost functions. Case studies of research and development (R&D) and technical innovation. Management of science and technology; transfer and adaptation of intermediate and advanced technologies to emerging nations.

ECO 415 EUROPEAN ECONOMIC HISTORY (5) The development of Mediterranean and Western European economies from the earliest times to the 20th Century. Attention is centered on capital accumulation, technology, trade, industrialization, monetary factors, and the role of government in economic organization.

ECO 416 ECONOMIC DEVELOPMENT OF THE UNITED STATES (5) The growth of the American economy from colonial times to the present; special emphasis on the market forces, institutional arrangements, and policies contributing to this process.

ECO 417 AMERICAN BUSINESS HISTORY (5) The growth of American business from 1880 to present; integration, diversification, and foreign expansion. Business strategies and managerial structures.

ECO 418 ORIGINS OF INDUSTRIALIZATION (5) The transformation to modern society. The earliest industrial revolution in England, 1750-1850, and its impact on the European continent.

ECO 421 LAND AND RESOURCE ECONOMICS (5) Availability, use, and control of land and other natural resources. Resource conservation, investment, and taxation. Environmental implications. Resource markets and pricing.

ECO 422 ECONOMICS OF TRANSPORTATION (5) Economic analysis applied to specific problems of transport. Effects of location and transportation cost on firm behavior; public regulation and policy; capacity, rate structure, service areas; problems of urban mass transportation. (Recommended preparation: ECO 307.)

ECO 424 ECONOMIC POLICY FOR INDUSTRY (5) Governmental activities affecting business, government regulation of business and its historical, legal, and economic perspectives, including recent developments in the United States and abroad; governmental assistance to business; proposed policies. (Recommended preparation ECO 307.)

ECO 425 PUBLIC CHOICE AND THE PUBLIC FINANCES (5) (W) Analysis of administrative and legislative decisions applicable to public goods and services; government expenditure policy; sources of revenue; public credit; fiscal policy, principles and methods of taxation and financial administration. (Recommended preparation: ECO 307.)

ECO 426 ISSUES IN MONEY AND BANKING (5) (S) Application of monetary theory to current issues and to monetary policy.

ECO 428 LABOR ECONOMICS (5) (S) Economic problems and issues of trade union organization and wage theory; job security, hours, working conditions, labor legislation, unemployment, and discrimination. (Recommended preparation, ECO 307.)

ECO 429 MANPOWER PROBLEMS AND PROGRAMS (5) (W) Problems of human resource development, examination of programs for training and upgrading of workers; barriers to skill development and job entry; formulation of public policies on human resources.

ECO 430 INTRODUCTION TO MATHEMATICAL ECONOMICS (5) (W) Mathematical formulation of economic theory. Mathematical treatment of maximizing and optimizing behavior; applications to consumer and business firm theory, value, economic strategies, growth and stability. Emphasis on understanding of analytical techniques. (Recommended preparation, ECO 307 or 308.)

ECO 431 INTRODUCTION TO ECONOMETRICS (5) (S) Introduction to measurement in economics; numerical evaluation of mathematical models by statistical methods; survey of classical models; scope and method of econometric analysis. (Recommended preparation: ECO 307 or 308, and ECO 430.)

ECO 432 CAPITAL THEORY (5) The role of capital in economic analysis. Capital and growth theory — turnpike theorems, applied capital theory and business optimality, capital and distribution theory. Prerequisites: ECO 307, ECO 308, or ECO 430 or consent of instructor.

ECO 434 MEDICAL AND HEALTH ECONOMICS (5) Economic analysis of medical and health services. Physician and dentist pricing; hospital supply; markets in health-related professions; drug and equipment markets; medical and health insurance; national priorities and policy for health service delivery. (Recommended preparation: ECO 307.)

ECO 436 MONEY AND NATIONAL INCOME DETERMINATION (5) (W) The basic model of income determination is built emphasizing the roles of real and monetary sectors of the economy. Results of empirical work are surveyed.

ECO 437 WORLD ECONOMY (5) A broad overview of the international economy in historical perspective. Topics: economic demography, trade flows, capital movements, diffusion of technology, and the emergence of transnational institutions. The student will obtain a conception of how economic interdependence has developed.

ECO 438 THE INTERNATIONAL ECONOMY (5) (W,SS) Principles of international trade; significance of geographic, economic, social and political influences; current problems in international trade and payments; tariffs and commercial policy; role of international organizations. (Recommended preparation: ECO 308.)

ECO 439 INTERNATIONAL MONETARY RELATIONS (5) International money and capital markets, international financial institutions. Interpretation of balance of payments statements. Adjustments to disequilibria through changes in prices, exchange rates, and national income.

ECO 440 MULTINATIONAL CORPORATION (5) Growth and development of multinational enterprise. Theories of direct foreign investment. Impact on the United States and other developed and less developed nations. Policy implications relating to employment, economic growth, balance of payments, taxation, and national defense. National sovereignty and the multinational corporation.

ECO 441 ECONOMICS AND DIPLOMACY (5) Description and analysis of interactions between economic and foreign policy. Free trade vs. protectionism; balance of payments problems; raw material needs and their influence on foreign policy; the "open door" policy; antitrust, taxation, and technology; East-West trade. The approach will be historical.

ECO 444 PROSPERITY, DEPRESSION AND INFLATION (5) Historical analysis of the Great Depression, business cycles, inflation, and prosperity. Emphasis on the theories of economic cycles and inflation.

ECO 454 THE LATIN AMERICAN ECONOMIES (5) Survey of economic status and problems of Latin American nations; analysis of economic and social forces at work in Latin American development.

ECO 455 LAS ECONOMIAS LATINOAMERICANAS (5) (SS) Aspectos del desarrollo economico de los paises latinoamericanos; enfoque en las fuerzas sociales, institucionales, y del mercado y sus efectos sobre los paises en vias de desarrollo.

ECO 456 ECONOMIC INTEGRATION — LATIN AMERICA (5) Analysis of the method, meaning and implications of economics in the Latin American area. Designed to enable the student to appreciate the trend toward regionalism and economic cooperation. Prerequisite: ECO 301 or equivalent.

ECO 460-463 UNDERGRADUATE TUTORIAL (VAR) Supervised readings, individual tutorial, and preparation of reports. Requires consent of faculty supervisor and department chairman.

ECO 467 SEMINAR ON CURRENT ECONOMIC TOPICS (5) (W,S) Faculty and student discussion of contemporary economic and social issues.

ECO 507 MONETARY THEORY AND POLICY (5) (W) Relationship of money supply and interest rate to economic stabilization; consideration of federal reserve system, money market, and factors determining money supply and demand; neo-Keynesian, Chicago, and radical policy views.

ECO 510 ECONOMIC PROBLEMS OF EMERGING NATIONS (5) (W,SS) Specific economic problems of emerging nations and national groupings; basic approaches to economic development; major proposals for accelerating development; role of planning; trade, aid and economic integration. (Recommended preparation: ECO 307 or 308.)

ECO 520 URBAN AND REGIONAL ECONOMICS (5) Application of economic analysis to urban growth and the urban-regional environment; consideration of public services, transportation, ghetto problems, and urban organization; analysis of environmental protection problems and policies. (Recommended preparation: ECO 307, 308 or 319.)

ECO 531 ECONOMETRIC METHODS (5) Application of statistical methods to the estimation of simultaneous equation systems. Special topics including dynamic models, errors in variables, random coefficient regression. (Prerequisite: MAS 321/322. Recommended preparation, ECO 431).

ECO 560-563 ADVANCED INDIVIDUAL STUDY (Variable) Supervised readings, individual tutorial, and preparation of report. Requires consent of faculty supervisor and department chairman. Open to seniors and graduate students.

ECO 565 ADVANCED SEMINAR IN ECONOMIC THEORY (5) (F,W,S,SS) Variable-topic study group in theoretical problems. Open to seniors and graduate students.

ECO 566 ADVANCED SEMINAR IN APPLIED ECONOMICS (5) (F,W,S,SS) Variable-topic study group in application of economic analysis to specific problems. Open to seniors and graduate students.

ECO/MBA 606 MANAGERIAL ECONOMICS I (5) (F,W,S,SS) Basic microeconomic concepts as they apply to decision making within the organization; supply and demand; market structure and market behavior in specific industries; basic aggregate economic models and forecasting.

ECO 626 MONEY AND MONETARY POLICY (5) (W) Monetary theory and its application; consideration of central banking in the U.S. and its relation to the international economy, money markets, and financial intermediaries; survey of current policy views.

ECO/MBA 656 MANAGERIAL ECONOMICS II (5) (W) Extension of topics covered in ECO/MBA 606. Includes capital budgeting, linear programming, pricing, decision making under uncertainty, recent developments in theory of the firm. (Prerequisite: ECO/MBA 606.)

ECO 660 INDIVIDUAL GRADUATE STUDY (5-10) (F,W,S,SS) Supervised readings, tutorial, and preparation of report. Open only to graduate students. Requires consent of supervisor and approval of department chairman.

ECO 665 GRADUATE SEMINAR IN ECONOMIC THEORY (5) (F,W,S,SS) Variable-topic graduate study group in theoretical problems. Open only to students with graduate standing.

ECO 666 GRADUATE SEMINAR IN APPLIED ECONOMICS (5) (F,W,S,SS) Variable-topic study group in application of economic analysis to specific problems. Open to students with graduate standing.



## ENGLISH MAJOR

DEGREE: *Bachelor of Arts*

LOWER DIVISION REQUIREMENTS:

*Required Courses:* None

*Remark:* The prospective secondary school teacher should take the Foundations of Education courses in the lower division. *Students interested in teacher certification see note on page 5.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* |
|---|---|
| *Required Courses* | 45 |
| English | 45 |
| *Electives:* | |
| | 90 |

## COURSE OFFERINGS

ENG 300-310 THEMES IN LITERATURE (5) (F,W,S,SS) Individual sections will read and discuss works relating to topics of current and enduring interest. Literature as it reflects the identities of men and women; their places in families; in past, present, and future societies; in the natural world, and the cosmic order. May be repeated.

ENG 311 EXPOSITORY WRITING (5) (F,W,S,SS) An advanced composition course in the techniques of exposition, argumentation, and persuasion. Special sections for the foreign-born.

ENG 312 REPORT AND TECHNICAL WRITING (5) (W,S) For business, professional, and scientific students needing practice in collecting, organizing, interpreting, and presenting factual material.

ENG 313 IMAGINATIVE WRITING (5) (F,W,S) Practice in developing individual creative expression and in appreciating that talent in others.

ENG 314 THE MOVIES (5) (F,S) Viewing and discussion of films, with attention to cinematic ways of story-telling and to the popular film es an expression of cultural values.

ENG 315 RESEARCH AND WRITING (3) (S,F) This course has dual objectives: to acquaint students with basic research methodologies and give students practice in communicating the data generated by their research. Assignments will include such matters as researching information, documentation, organization, revising rough drafts and presenting the final draft. The primary emphasis will be to use the student's own interests and background for exploring relevant topics upon which to write.

ENG 320 ENGLISH LINGUISTICS (5) (F,W) Study of the sounds, vocabulary, and sentence patterns of standard modern English. Other topics include meaning, social and regional dialects, language change, and style.

ENG 360-370 MAJOR LITERARY MODES (5) (F,W,S) Individual sections will read and discuss the literary expression of heroic, tragic, comic, satiric, mythic, realistic, or other formalized views of human existence. May be repeated.

ENG 380 SURVEY OF AFRO-AMERICAN LITERATURE (5) (S,F) Study of Afro-American Literature from Phyllis Wheatley to James Baldwin. The first half of the course will be concentrated on writers before World War II while the second half will be designed to give students the opportunity to study modern authors from 1920 to present.

ENG 400-410 MAJOR LITERARY GENRES (5) (F,W,S,SS) Individual sections will read and discuss the form and development of novels or dramas, poetry, short fiction, or such special kinds as biographies, folksongs and tales, or essays, among other genre. May be repeated.

ENG 415 WRITING POETRY (5) (F,W,S,SS) An intermediate course in writing poetry. Admission requires consent of the instructor.

ENG 416 WRITING FICTION (5) (F,W,S,SS) An intermediate course in writing fiction. Admission requires consent of instructor.

ENG 420 HISTORY OF THE FILM (5) Discussion, with examples, of the development of cinematic art from its European and American beginnings to its place as the major world art form.

ENG 421 RHETORIC AND POETICS (5) Ancient and modern theory and practice in discussing the formal properties of elevated language.

ENG 422 RHETORIC AND COMMUNICATION: BLACK RHETORIC (5) (F) Black people in America have been involved in several significant movements designed primarily to meet the challenges of institutionalized racism. While these movements generally were reactions to the negative actions of an external and alien non-black community, they were also responses initiated by a few blacks to meet the needs of a larger black population. The course will focus on these movements, i.e., abolition, segregation, integration, and emigration, giving special emphasis to each of the movements' leading rhetors, their arguments, counter-arguments, and appeals.

ENG 423 BLACK ENGLISH

ENG 431 SHAKESPEARE: COMEDIES (5) (F) Reading and informal dramatic interpretation of representative plays.

ENG 432 SHAKESPEARE: TRAGEDIES (5) (W) Reading and informal dramatic interpretation of representative plays.

ENG 433 SHAKESPEARE: HISTORIES (5) (S) Reading and informal dramatic interpretation of representative plays.

ENG 435-440 PERIODS IN AMERICAN LITERATURE (5) (F,W,S,SS) Individual sections will read and discuss works in the context of such historical settings as the colonial, federal, antebellum, reconstruction, and other periods of the American past. May be repeated.

ENG 441-445 REGIONAL LITERATURE IN ENGLISH (5) Individual sections will discuss English writing in Ireland, Scotland, Wales, Canada, the Caribbean, India, sub-Saharan Africa, and Oceania, as well as distinctive regions in England and America. May be repeated.

ENG 450 LITERATURE AMONG THE ARTS AND SCIENCES (5) Individual sections will relate the study of literature to other disciplines in the humanities, fine arts, the social and natural sciences. May be repeated.

ENG 451-454 PERIODS IN ENGLISH LITERATURE (5) (F,W,S) Individual sections will read and discuss works in the context of such historical settings as the medieval, Tudor, Restoration, Victorian, and other periods of the English past. May be repeated.

ENG 460 APPLIED LINGUISTICS (5) Linguistics in the classroom, English as a Second Language, Stylistics, Dialects.

ENG 498 INDEPENDENT STUDY (Variable) (F,W,S,SS) Individual conferences, assigned readings, reports on independent investigations with the consent of the chairman.

ENG 499 SPECIAL TOPICS (Variable) (F,W,S,SS) A course designed to give groups of students an opportunity to pursue special studies not otherwise offered. Requires consent of the chairman.

ENG 500-510 MAJOR AMERICAN LITERARY FIGURES (5) (F,W,S,SS) Each section will consider the lifework of several authors such as Hawthorne, Melville, Whitman, Twain, James, Faulkner, Mailer, Wright, Baldwin, or others.

ENG 511-520 MAJOR BRITISH LITERARY FIGURES (5) (F,W,S,SS) Each section will consider the lifework of an author such as Chaucer, Spenser, Milton, Pope, Wordsworth, Dickens, Browning, Joyce, or others. May be repeated.

ENG 541-550 LITERARY MOVEMENTS (5) (F,W,S) Individual sections will study the authors, works, and audiences involved in such phenomena as Humanism, Mannerism, Romanticism, Symbolism, The Harlem Renaissance, and others. May be repeated.

ENG 552 MODERN ENGLISH GRAMMAR (5) (W) Practical study of syntax. Prerequisite: ENG 307 or consent of the instructor.

ENG 553 HISTORY OF THE ENGLISH LANGUAGE (5) (S) Study of the development of the grammar and vocabulary represented in samples of the English language from the 8th century down to modern times. Prerequisite: ENG 307 or consent of the instructor.

ENG 557 LITERARY CRITICISM AND SCHOLARSHIP (5) Techniques and goals of humanistic research, bibliography, and critical commentary.

ENG 560 STUDIES IN THE FILM (5) Advanced work in film criticism. Study of individual Directors.

ENG 598 INDEPENDENT STUDY (Variable) (F,W,S,SS) Individual conferences, assigned readings, reports on independent investigations with the consent of the chairman.

ENG 599 SPECIAL TOPICS (Variable) (F,W,S,SS) A course designed to give groups of students an opportunity to pursue special studies not otherwise offered. Requires consent of the chairman.

ENG 698 INDEPENDENT STUDY (Variable) (F,W,S,SS) Individual conferences, assigned readings, reports on independent investigations with the consent of the chairman.

ENG 699 SPECIAL TOPICS (Variable) (F,W,S,SS) A course designed to give groups of students an opportunity to pursue special studies not otherwise offered. Requires consent of the chairman.

# FINE ARTS

## ART MAJOR

DEGREE: *Bachelor of Fine Arts* *Students interested in teacher certification see note on page 5.

LOWER DIVISION PREPARATION

*Required Courses:* 6 semester hours of art survey or department exam; 6 semester hours of design or acceptable portfolio; 6 semester hours of drawing; 6 semester hours of beginning studio.

*Recommended Courses:* painting, sculpture, printmaking, ceramics, photography, jewelry, weaving, cinematography.

*Remarks:* Student who does not have an A.A. degree and/or who lacks proficiency in required courses will be expected to take more than 90 quarter hours to complete the degree or to make up courses at the lower division level.

UPPER DIVISION PROGRAM

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **65** |
| ARH 475 (Contemporary Art) | 5 | |
| ARH 477 (Criticism) | 5 | |
| Art History Elective | 5 | |
| Studio Major | 25 | |
| FIA 490 | 5 | |
| Studio Elective | 20 | |
| *Electives:* | | **25** |
| | | **90** |



# COURSE OFFERINGS

ARH 305 SURVEY OF THE CONTEMPORARY ARTS (5) (F,W) A survey of the most recent developments in the fields of the visual arts, architecture, music, theatre, film, etc., lectures, films, speakers. Open to all students.

FIA 305 INTRODUCTION TO 2D STUDIO ART (5) (W) The student is encouraged to experience as broad a spectrum as possible; from drawing to relief printing and painting; from traditional anatomy and perspective to pure design in the contemporary sense. Open to all students.

FIA 306 INTRODUCTION TO 3D STUDIO ART (5) (S) A broad area of study in most of the three dimensional areas; modeling, carving, plastics, welding and wood. Open to all students.

FIA 315-415-515 DRAWING (5-5-VAR.) (W,S) Drawing will be considered as an essential part of every art student's curriculum. Depending on his lower level work, a student will be encouraged to take at least one drawing course at the University. Off-campus studio work may be arranged. (May be repeated).

FIA 316-416-516 (5-5-VAR.) (F,W,S,SS) Drawing from the model during assigned studio time. Open to all students. (May be repeated).

FIA 325-425-525 PAINTING (5-5-VAR) (F,W,S,SS) A study through the use of visual aids and individual criticism of the student's work. Any media on flat canvas up to painted, fabricated sculpture may be used. (May be repeated).

FIA 335-435-535 SCULPTURE (5-5-VAR) (F,W,S) With a background in beginning sculpture, the student will develop standards of excellence, both in concept and technique, with stress on individual expression. An equipped shop will be available to the student. (May be repeated).

FIA 337-437-537 JEWELRY AND METALS (5-5-VAR) (F,W,S) A study of basic metal techniques and strengthening of three-dimensional design concepts for the beginner. The advanced student will explore conceptual and technical possibilities of an individual metal. A shop will be available for students. (May be repeated).

FIA 345-445-545 PRINTMAKING (5-5-VAR) (F,W,S) With a knowledge of basic etching and relief printing, the art student will explore a specific media such as etching, lithography, silk-screen, and other experimental techniques. (May be repeated).

FIA 355-455-555 PHOTOGRAPHY (5-5-VAR) (F,W,S) With a knowledge of beginning developing, printing and use of a camera, the art student will pursue his own direction with a heavy emphasis on individual approach, print quality, use of equipment and criticism. (May be repeated).

FIA 357 INTRODUCTION TO FILMMAKING (5) (F,W) For the beginning student of filmmaking. Survey of the origins and development of cinematography as an art form. Presentation and technical analysis of selected films.

FIA 358 FILM PRODUCTION II (5) (S) Conceptual study of total-filmmaking. Equipment, procedures, locations, sets, actors, and production staff will be examined from the point of view of the director. Student will conceptualize, shoot and edit a short film. Prerequisite: FIA 357 or permission of the instructor. May be repeated.

FIA 361 CERAMICS (5) (F,W,S,SS) A beginning course for art and non-art majors. Fundamentals of throwing, hand building, and glaze application.

FIA 375-475-575 VIDEO ART (5-5-VAR) (F,W,S) Studio experience in conventional and experimental video processing with an emphasis on relating contemporary developments in art theory and criticism. An international exchange video tape bank and color capable television facilities will be available (may be repeated).

FIA 458 FILM PRODUCTION II (5) (S) Conceptual study of total-filmmaking. Equipment, procedures, locations, sets, actors and production staff will be examined from the point of view of the director. Student will conceptualize, shoot and edit a short film. (Prerequisite: FIA 357 or permission of the instructor. May be repeated).

FIA 465-565 CERAMICS (5-VAR) (F,W,S) The advanced student will explore all aspects of expression in clay and glaze. Students are expected to be mostly self-directed. Prerequisite: FIA 361 or permission of the instructor. (May be repeated).

FIA 385-485-585 DIRECTED STUDY (VAR) (F,W,S,SS) A group of students, with the approval of the Art Department faculty, may select a master artist teacher and pursue a course of art study in selected areas such as glass, graphic design, film, multi-media, environmental design, sound, etc. Arrangements must be made at least a quarter before course is offered. (May be repeated).

FIA 395-495-595 RESEARCH (VAR) (F,W,S,SS) Students may study or research an individual art project with an art faculty member. Complexity and amount of work will determine the number of hours. (May be repeated).

FIA 490 (5) (F,W,S,SS) Completion of the student's major area in a studio situation that will result in a student exhibit. Arrangements must be made at least 3 quarters in advance of expected graduation date. Prerequisite: 25 hours of one studio area.

ARH 416 ART OF CHINA & JAPAN (5) (F) An introduction to the art of China to the Ming Dynasty and Japan through the 18th Century. The emphasis will be on painting and sculpture with some ceramics and architecture.

ARH 435 GREEK AND ROMAN ART (5) (S) Lectures, slides, visitors and student research will be used.

ARH 455 RENAISSANCE ART (5) (W) Lectures, slides, visitors and student research will be used.

ARH 466 NINETEENTH CENTURY PAINTING (5) A study of the various challenges offered artists at the beginning of the nineteenth century and of subsequent solutions created by painters in America, England, France, Germany and Italy. Styles such as neo-classicism, romanticism, realism, eroticism, Pre-Raphaeliticism, luminism, impressionism and post-impressionism will be examined.

ARH 467 AMERICAN ART (5) (W) Lectures, slides, visitors and student research will be used.

ARH 475 CONTEMPORARY ART (5) (F) Lectures, slides, visitors and student research will be used.

ARH 476 MODERN ART (5) Lectures, slides, visitors and student research will be used.

ARH 477 SEMINAR IN ART CRITICISM (5) Readings and individual projects. Prerequisite: ARH 585 or permission of the instructor.

ARH 478 WOMEN AND ART (5) Women in the history of art; past, present and future. Slides, lectures, films, panels and discussions.

ARH 485-585 DIRECTED STUDIES (VAR) A group of students, with the approval of the art faculty, may select a master teacher of theory, research or criticism in selected areas as film, painting, sculpture, architecture, crafts, art history, multi-media art, etc. Arrangements must be made at least a quarter before course is offered. (May be repeated).

ARH 495-595 RESEARCH (VAR) Art history, criticism and theory in areas not covered by the present program and in which the student wishes to study. (Permission of instructor. May be repeated).



## MUSIC MAJOR

DEGREE: *Bachelor of Music*

LOWER DIVISION PREPARATION:

*Required courses:* None

*Recommended courses:* 16 semester hours in music theory and 16 semester hours in applied music.

*Remark:* The student who does not have an Associate in Arts in Music or lacks proficiency in theory, sight singing, and performance in a major instrument will be expected to take more than 90 quarter hours of upper division work to complete the degree.

UPPER DIVISION PROGRAM:

## APPLIED MUSIC

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **60** |
| Theory (MUS 335, MUS 326, MUS 327) | 15 | |
| History (MUS 317, MUS 415, MUS 416 or MUS 417) | 15 | |
| Organizations (6 quarters) | 12 | |
| Conducting | 2 | |
| Applied (6 quarters) | 12 | |
| Recital and Research and Directed Study | 4 | |
| *Electives:* | | **30** |
| | | **90** |

## CONDUCTING

| | | |
|---|---|---|
| *Required Courses:* | | **60** |
| Theory | 15 | |
| History | 15 | |
| Organizations (6 quarters) | 12 | |
| Conducting | 6* | |
| Applied (6 quarters) | 12 | |
| *The student is required to conduct a performing organization (a couple numbers, not a complete program) during his or her senior year. | | |
| *Electives:* | | **30** |
| | | **90** |

## THEORY AND COMPOSITION

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **60** |
| Theory | 15 | |
| Composition | 10 | |
| History | 10 | |
| Organizations (5 quarters) | 10 | |
| Conducting | 2 | |
| Applied (5 quarters or 5 hours applied and 5 hours composition lessons) | 10 | |
| Recital and Research and Directed Study | 3* | |
| *The performance of an original composition with analysis or a lecture on a theoretical subject for the student body. | | |
| *Electives:* | | **30** |
| | | **90** |

## MUSICOLOGY

| | | |
|---|---|---|
| *Required Courses:* | | **60** |
| Theory | 15 | |
| History | 20 | |
| Organizations (5 quarters) | 10 | |
| Conducting | 2 | |
| Applied (5 quarters) | 10 | |
| Research | 3* | |
| *A lecture for the student body, part of the research requirement. | | |
| *Electives:* | | **30** |
| | | **90** |

***TEACHER CERTIFICATION**

| | | |
|---|---|---|
| *Required Music Courses:* | | **60** |
| Theory | 15 | |
| History | 15 | |
| Organizations (6 quarters) | 12 | |
| Conducting | 2 | |
| Applied (6 quarters) | 12 | |
| Research and Recital | 2 | |
| Guitar (MUP 365) | 2 | |
| *Required Education Courses:* | | **40** |
| EDU 305 Schooling in America | 5 | |
| EDU 311 General Teaching Lab I | 5 | |
| EDU 312 General Teaching Lab II | 5 | |
| MUE 316 Special Teaching Lab I | 5 | |
| MUE 416 Special Teaching Lab II | 5 | |
| MUE 425 Student Teaching | 15 | |
| | | **100** |

*Students interested in teacher certification see note on page 5.

## COURSE OFFERINGS

MUS 305 UNDERSTANDING AND ENJOYMENT OF MUSIC I (5) (F,S) A non-technical introduction to program music of the 19th century and folk/popular music of the 20th century.

MUS 306 UNDERSTANDING AND ENJOYMENT OF MUSIC II (5) (W,SS) A non-technical introduction to music before the 1800's and music of the 20th century. Comparisons of music up to and including electronic music.

MUS 307 EVOLUTION OF JAZZ (5) (F,W,S) The influx of Africa and Latin America on the development and styles of jazz music and its various exponents such as soul, blues, rock, etc.

MUS 315 MUSIC HISTORY SURVEY (5) (F) A technical study of music from antiquity to 1850. Lectures on historical styles will be supplemented with recordings and analysis.

MUS 316 MUSIC HISTORY SURVEY (5) (W) A technical study of music from 1850 to the present. Lectures on historical styles will be supplemented with recordings and analysis.

MUS 317 TWENTIETH CENTURY MUSIC — EXPLORATION (5) (F,S) An exploration study of music since 1900. Lectures on style plus demonstration will be supplemented with recordings and analysis. Elements of the popular idiom will be investigated.

MUS 325 MUSIC THEORY II (5) (F,W,S) Designed for students to develop their skills in or to review basic theory, harmony, sightsinging and ear training. Prerequisite: The music theory content of MUS 326 or equivalent.

MUS 326 COUNTERPOINT (5) (F,S) With a background of basic theory, harmony and ear training, the student will study linear writing through species counterpoint and its comparison with the 18th century harmonic idioms as well as polyphonic and homophonic idioms of the 14th through the 20th centuries.

MUS 327 FORM AND ANALYSIS (5) (W,S) With a background of counterpoint, the student will study the analysis of phrases, binary and ternary song forms, variation, rondo, sonatina and sonata — allegro forms, cyclic and free forms of Western culture music. Particular emphasis will be placed on 20th century compositions.

MUS 328 MUSIC THEORY I (5) (F,W,S,SS) A music theory course, designed to provide a basis in the composition and analysis of tonal music, particularly that of twentieth century popular styles.

MUS 335 CHORAL TECHNIQUES (5) (F,W,S,SS) A course designed to strengthen and build the student's ability to write and perform Melodic, Harmonic and Keyboard dictation. It will also provide a rhythm pattern sequence necessary to write and understand the modern idiom of score reading, analysis and transposition.

MUS 385-585 DIRECTED STUDY (1-5) (F,W,S,SS) Designed for students to provide areas of exploration and specialization beyond the basic selected study programs such as electronic music, religious music literature, sound techniques, etc.

MUS 395, 495, 595 RESEARCH (1-5) (F,W,S,SS) Research composition or performance projects under the guidance and direction of the music faculty. (May be repeated.)

MUS 415 HISTORY AND LITERATURE OF OPERA (5) (S) Chronological survey of opera literature from the 17th century to present day. Analysis and performance of representative works.

MUS 416 SYMPHONIC LITERATURE (5) (SS) Survey of symphonic literature from the 17th century to present day. Analysis and illustrations of representative works.

MUS 417 KEYBOARD LITERATURE (5) (S) Study of solo works and concertos from the 17th century to present day. Stylistic analysis and performance practices with illustrations of representative works.

MUS 425 ORCHESTRATION (5) (W,S) With a background of basic theory, the student will explore the techniques of writing and arranging for instruments in performing organizations and choral groups.

MUS 428 TWENTIETH CENTURY THEORY — COMPOSITION (5) (F,W) This course will analyze and compose works using the following procedures: melodic-harmonic techniques developed in the late nineteenth century, serial, improvisational and those derived from the use of electronic devices as performance media. Prerequisites: Survey of Basic Music and Counterpoint.

MUS 427 MUSIC COMPOSITION I (5) (F,W,S) A course designed to give the advanced student more intensive experience in creative writing. Compositional techniques and devices will be studied through an analysis of works by major composers. Prerequisite: Orchestration or permission of instructor.

MUS 428 MUSIC COMPOSITION II (5) (F,W,S,SS) A continuation of Music Composition I. The larger forms of music composition are analyzed and composed. Prerequisite: Music Composition I or permission of instructor.

MUS 429 BUSINESS OF MUSIC (5) (W,SS) Principles and practices of modern publishing techniques, copyright laws and wholesale and retail distribution of music. Performance rights, agreements and relations between producers, directors, performers, writers, personnel managers and booking agents. Prerequisite: Permission of instructor.

MUS 435 BASIC CONDUCTING (2) (F,S,SS) A basic conducting course to gain fundamental techniques and interpretation. A prerequisite for both advanced instrumental and choral conducting.

MUS 436 INSTRUMENTAL CONDUCTING (2) (S) With a background in basic theory and having performed in organizations, the student will develop a knowledge of baton technique, score reading and interpretation. Prerequisite: Basic Conducting.

MUS 437 CHORAL CONDUCTING (2) (W) With a background in basic theory and having performed in organizations, the student will develop techniques of group conducting including madrigal, glee, choir, etc. A survey of choral literature will be included. Prerequisite: Basic Conducting.

MUS 485 RECITAL AND RESEARCH (2) (F,W,S,SS) All music majors, before graduation, must present at least one half of a public recital and pass an oral examination on the music programmed.

MUS 517 TWENTIETH CENTURY MUSIC "NEW DIMENSIONS" (4) (W,SS) A technical study of music since 1900. Lectures on style plus demonstrations and practical application will be supplemented with recordings and analysis. Electronic and multi-media performance will be accented.

MUS 526 ARRANGING (4) (W,SS) A practical course in arranging with a definite theory approach to meet the high school needs.

MUS 534 ADVANCED CONDUCTING TECHNIQUES (2) (W,SS) An extension of Form and Analysis with interpretation both in Instrumental and Choral Conducting. Twentieth Century scoring and symbol interpretation will be studied in depth with actual conducting experience required.

MUP 305, 405, 505 UNIVERSITY SINGERS (VAR) (F,W,S) A chorus performing repertoire primarily from great choral works. Large orchestral accompaniment as well as various instrumental ensembles will be utilized.

MUP 307, 407, 507 COLLEGIATE CHORALE (VAR) (F,W,S,SS) A small ensemble of selected mixed voices performing repertoire of the modern popular idiom. Miniature contemporary accompaniment will be utilized.

MUP 315, 415, 515 ORCHESTRA (VAR) (F,W,S,SS) An instrumental ensemble performing works from the symphonic repertory. Previous experience and permission of conductor.

MUP 317, 417, 517 WIND ENSEMBLE (VAR) (F,W,S,SS) A group of wind and percussion instrumentalists. Permission of conductor.

MUP 325, 425, 525 STUDIO JAZZ (VAR) (F,W,S,SS) An ensemble to provide creative professional level experience in the contemporary popular idiom.

MUP 327, 427, 527 CHAMBER MUSIC (VAR) (F,W,S,SS) Small ensemble in the performing of Chamber Music literature. Permission of conductor.

MUP 335, 435, 535 APPLIED MUSIC — BRASS (1-2) (F,W,S,SS) Individual instruction in applied music on trumpet, French horn, trombone, baritone horn or tuba.

MUP 345, 445, 545 APPLIED MUSIC — PERCUSSION (1-2) (F,W,S,SS) Individual instruction in applied music on all percussion instruments.

MUP 355, 455, 555 APPLIED MUSIC — PIANO/ORGAN (1-2) (F,W,S,SS) Individual instruction in applied music on piano or organ.

MUP 365, 465, 565 APPLIED MUSIC — STRINGS (1-2) (F,W,S,SS) Individual instruction in applied music on violin, viola, cello, string bass, guitar or harp.

MUP 366 GUITAR SKILLS (5) (F,W,S,SS) Emphasis on music reading and elementary techniques. Open to all Florida International University students.

MUP 367 INTERMEDIATE GUITAR SKILLS (5) (F,W,S,SS) Emphasis on technique and styles such as calypso, folk, blues, classical and jazz. Open to all Florida International University students.

MUP 375, 475, 575 APPLIED MUSIC — VOICE (1-2) (F,W,S,SS) Individual instruction in applied music in voice.

MUP 385, 485, 585 APPLIED MUSIC — WOODWINDS (1-2) (F,W,S,SS) Individual instruction in applied music on flute, oboe, clarinet, bassoon or saxophone.



## THEATRE MAJOR

DEGREE: *Bachelor of Fine Arts in Theatre*

LOWER DIVISION PREPARATION:

*Required Courses:* Three semester hours *each* in acting and stagecraft. Equivalent life experience is acceptable upon approval.

*Recommended Courses:* Three-six semester hours in dance; three semester hours in voice for the stage; three semester hours in costuming; three semester hours in stage lighting; three-six semester hours in Theatre workshop.

UPPER DIVISION PROGRAM:

The Theatre Program is production oriented. A student entering the program may elect to specialize in one of the following three areas: Performance (Acting-

Directing), Production (Design-Technical Theatre) or Film. In addition to satisfactory completion of all course work, a Theatre major is required to participate (within his or her area of specialization) in at least half of all major productions presented during enrollment in the Theatre Program.

| | Quarter Hours |
|---|---|
| *Required courses:* | **60** |
| Theatre History | 10 |
| Performance and Production | 5 |
| Theatre courses (in area of selected emphasis) | 45 |
| *Elective courses:* | |
| Theatre electives | 20 |
| Non-Theatre electives | 10 |
| | **90** |

# COURSE OFFERINGS

**(by area of specialization)**

## PERFORMANCE (Acting/Directing)

DAN 315 DANCE (5) (F,S) Basic stage movement. Development of the body as an instrument of expression. (May be repeated)

DAN 415 DANCE (5) (F,S) With some basic stage movement experience, the student will do movement studies to develop impulses to rhythm and melody patterns. (May be repeated.)

THE 315 VOCAL TECHNIQUES (2) (F) Development of breath control, diction, resonance and related vocal music techniques. (For Theatre Majors only.)

THE 316 BASIC ORAL INTERPRETATION (5) (F) Development of the voice as an instrument for expressive interpretation of literature.

THE 317 ACTING (5) (W,S,SS) With a fundamental knowledge of stage nomenclature, vocal and physical performance skills, audition and rehearsal techniques, the student will focus on developing a character within a particular acting style. Extensive study and practice in scenes from period plays. (May be repeated)

THE 417 ACTING (5) (F,W) With a thorough knowledge of all aspects of the actor's craft and a highly motivated background of performance experience, the actor will concentrate on refinement of ensemble playing techniques in a total performance situation which will be presented for an audience. (May be repeated.)

THE 325 DIRECTING (5) (W) A study of fundamental directing principles. Areas included will be: choice of play and its analysis, casting, blocking, rehearsal techniques and coordination of cast and production personnel. Students will direct short scenes for performance. (May be repeated.)

THE 425 DIRECTING (5) (S) With a broad understanding of basic directing skills and some directing experience, focus will be on methods of unifying all production elements toward the finished performance. Students will direct a play for public performance. (May be repeated.)

## PRODUCTION (Design/Technical Theatre)

THE 335 STAGECRAFT (5) (F) A lecture-laboratory course covering the basic elements of scenery construction, painting, rigging and stage properties.

THE 435 STAGECRAFT (5) (F) Advanced studies of the scene technician's craft with emphasis on the creative use of modern materials and methods. Selection and cost of materials, multi-media effects, sound effects, advanced stage carpentry and stagecraft supervision will be covered.

THE 336 STAGE LIGHTING (5) (S) The study of elementary electricity, lights and circuits; basic techniques of designing and executing lighting for the stage.

THE 337 STAGE MAKEUP (5) (F) Fundamentals of straight and character makeup. The application of principles governing line, color, light and shade to makeup. Practical experience through production participation.

THE 345 THEATRE DESIGN (5) (W) Fundamentals of design for the theatre. Included are methods of analysis and research, technical drawing and rendering.

THE 445 THEATRE DESIGN (5) (S) With a knowledge of the fundamentals theatre design, the student will survey historical styles and work with advanced directing students to design and execute scenery for a play.

THE 431 STAGE COSTUMING (5) (F) Study of period costume design with emphasis on research techniques, design adaptation, cut fabric, and decorative detail for stage costume.

THE 432 STAGE COSTUMING (5) (W) A continuation of THE 531. Applied studies in design adaptation, pattern drafting and total costume.

## FILM

THE 357 INTRODUCTION TO FILMMAKING (5) (F,W,SS) For the beginning student of filmmaking. Survey of the origins and development of cinematography as an art form. Presentation and technical analysis of selected films.

THE 358 FILM PRODUCTION I (5) (W) Conceptual study of total-filmmaking. Equipment, procedures, locations, sets, actors, and production staff will be examined from the point of view of the director. Student will conceptualize, shoot and edit a short film. (Prerequisite: THE 357 or permission of the instructor. May be repeated.)

THE 458 FILM PRODUCTION II (5) (S) Conceptual study of total-filmmaking. Equipment, procedures, locations, sets, actors, and production staff will be examined from the point of view of the director. Student will conceptualize, shoot and edit a short film. (Prerequisite: THE 358 or permission of the instructor. May be repeated.)

### SUPPLEMENTARY ELECTIVES

SPE 305 PUBLIC SPEAKING (5) Study of the principles of ethical and effective public speaking with practice in the construction and delivery of original speeches before an audience. (For non-theatre majors only)

THE 305 SURVEY OF THE THEATRE ARTS (5) A consideration of all the dramatic elements of the theatre; television, film and live theatre. Designed for the non-theatre student to generate an awareness and appreciation of the theatre. (For non-theatre majors only)

THE 328 CHILDREN'S THEATRE (5) Techniques of selection, production and performance of plays for children.

THE 339 BLACK THEATRE TECHNIQUES (5) Study and practice of production methods unique to the Black performer and Black Theatre; i.e., making-up and lighting the Black performer, play selection, rehearsal techniques. (May be repeated.)

THE 427 CREATIVE DRAMATICS (5) The study of informal drama activity for children. Techniques of improvisation, sense recall, music and movement are employed. Permission of the instructor required.

THE 451 DEVELOPMENT OF THE THEATRE (5) A survey of theatre architecture, modes of production, major figures and trends in the theatre from its origins to Turgenev.

THE 452 DEVELOPMENT OF THE THEATRE (5) A continuation of THE 551. Survey will be from Turgenev to the present.

THE 455 DEVELOPMENT OF BLACK THEATRE IN AMERICA (5) A historical survey of the Black performer in America. Primary emphasis on current trends in Black Theatre.

THE 465 PLAYWRITING Study of the theory and principles of writing plays for the stage. Practice in writing either the short or long play. (May be repeated.)

THE 475 THEATRE MANAGEMENT (5) Basic studies in methods of audience promotion and service, i.e., publicity, box office and house management.

THE 485 PERFORMANCE AND PRODUCTION (VAR 1-15) Supervised work in actual university, community, or professional theatre production on an internship basis. Credit will vary with amount of time and responsibility involved. (If taken for less than maximum credit, may be repeated for a total of not more than 15 quarter hours.)

THE 495 RESEARCH (1-5) Supervised individual investigation of special research projects. Credit will vary with the nature and scope of the project. (May be repeated.)

### GRADUATE COURSES

THE 585 PERFORMANCE AND PRODUCTION (1-15) (F,W,S,SS) Supervised work in actual university, community, or professional theatre production on an internship basis. Credit will vary with amount of time and responsibility involved. (If taken for less than maximum credit, may be repeated for a total of not more than 15 quarter hours.)

THE 595 RESEARCH (1-5) (F,W,S,SS) Supervised individual investigation of special research projects. Credit will vary with the nature and scope of the project. (May be repeated)



## HISTORY MAJOR

DEGREE: *Bachelor of Science* *Students interested in teacher certification see note on page 5.

LOWER DIVISION PREPARATION:

*Required Courses:* None

*Remark:* 6 semester hours of advanced history courses may be counted toward the upper division major.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **45** |
| HIS 301 Introduction to History | 5 | |
| *Courses in the following areas:* | | |
| Medieval History | 5 | |
| Modern European History | 5 | |
| U.S. History | 5 | |
| Asian, African, Latin American or Caribbean History | 5 | |
| General History Courses | 20 | |
| *Electives:* | | **45** |
| | | **90** |

# COURSE OFFERINGS

HIS 301 INTRODUCTION TO HISTORY (5) (F,S) A study of why and how people read and write history. Emphasis will be upon the uses of history and historians' assumptions. Required of all majors and those seeking certification to teach history.

HIS 304-305 ANCIENT HISTORY (5,5) (W,S) An examination of the society, politics, literature and arts of Greece and Rome.

HIS 310-311 MEDIEVAL EUROPEAN HISTORY (5,5) (F,W) An examination of European life, culture and ideas from the fall of the Roman Empire to the Renaissance.

HIS 313-314 EARLY MODERN EUROPEAN HISTORY (5,5) (W,S) An examination of European civilization from the sixteenth century to the French Revolution.

HIS 316-317 MODERN EUROPEAN HISTORY (5,5) An examination of Europe from the French Revolution to the twentieth century.

HIS 320-321 EARLY UNITED STATES HISTORY (5,5) (F,W) An examination of American society from the earliest settlements to the Revolutionary Era up through the Jacksonian period.

HIS 323-324 MODERN UNITED STATES HISTORY (5,5) (W,S) An examination of American society from the rise of Industrialism to the 1960's.

HIS 330-331 EARLY LATIN AMERICAN HISTORY (5,5) (F) An examination of Latin American societies and civilizations from the pre-colonial period to the national revolutions.

HIS 333-334 MODERN LATIN AMERICAN HISTORY (5,5) (W) An examination of Latin American society and civilizations from the 1850's to the present.

HIS 340-341 RUSSIAN HISTORY (5,5) An examination of Russian society and politics from the Kievian period, through the Medieval Era to the foundation of the Soviet Union.

HIS 360-361 AFRICAN HISTORY (5,5) An introductory examination of various aspects of different African societies, cultures and nations.

HIS 375-379 REGIONAL AND NATIONAL HISTORY: EUROPE (5) A study of the histories of a particular country or area of Europe, Germany, France, England, etc. The subject matter will change quarterly. (See the quarterly course listing for the country under study).

HIS 380-384 REGIONAL AND NATIONAL HISTORY: U.S. AND CANADA (5) A study of the history of the particular countries or areas of Anglo- and Franco North America, the South, the Great West, Quebec, etc. The subject matter will change quarterly. (See the quarterly course listing for the country under study).

HIS 385-389 REGIONAL AND NATIONAL HISTORY: LATIN AMERICA (5) A study of the histories of a particular country or area of Latin America, Mexico, the River Platt, the Caribbean, etc. The subject matter will change quarterly. (See the quarterly course listing for the country under study).

HIS 395-396 REGIONAL AND NATIONAL HISTORY: AFRICA (5) A study of the histories of a particular country or region of Africa, West Africa, East Africa, Nigeria, etc. The subject matter will change quarterly. (See the quarterly course listing for the country under study).

HIS 397-398 SPECIAL TOPICS (Variable) (F,W,S,SS) A course designed to give groups of students an opportunity to pursue special studies not otherwise offered. Requires consent of the chairman.

HIS 399 INDEPENDENT STUDY (Variable) (F,W,S,SS) Individual conferences, assigned readings, reports on independent investigations with the consent of the chairman.

HIS 405-409 POLITICAL HISTORY (5) (W,S) An examination of political parties, factions and trends and their relationship to history. Each time this course is offered it will focus upon a specific political problem, party, etc., of a particular nation or society during one historical epoch. With a change in content or professor, this course may be repeated.

HIS 410-414 INTELLECTUAL HISTORY (5) (W,S) An examination of the ideas and images that have governed men and that men have used to understand their own actions in various historical contexts. Each time this course is offered it will focus upon specific problems (Puritanism, Humanism, etc.) of a particular nation or culture during one historical epoch. With a change in content or professor, this course may be repeated.

HIS 415-419 SOCIAL HISTORY (5) (F,W,S) An examination of social forces, classes and institutions and their impact upon historical events. Each time this course is offered it will focus upon a specific social institution or problem of a particular nation or culture during one historical epoch. With a change in content or professor, this course may be repeated.

HIS 420-424 CULTURAL HISTORY (5) (F,W,S) An examination of the arts and their relation to history. Each time this course is offered it will focus upon particular artistic expression (painting, jazz, etc.) of a particular nation or culture during one historicel epoch. With a change in content or profesor, this course may be repeated.

HIS 425-429 ECONOMIC HISTORY (5) An examination of economic forces, institutions, thoughts, systems; their impact upon history. Each time this course is offered it will focus upon a particular economic problem of a particular nation or culture during one historical epoch. With a change in content or professor, this course may be repeated.

HIS 435-439 RACIAL AND ETHNIC HISTORY (5) (W) An examination of particular races and ethnic groups and their impact upon different cultures and societies; it will also focus upon immigration, etc. With a change in content or professor, this course may be repeated.

HIS 445-449 CONTEMPORARY HISTORY (5) An examination of particular problems, influences and events in contemporary world. With a change in content or professor, this course may be repeated.

HIS 450-454 PSYCHOHISTORY (5) (F,W) An examination of the concept of the self and individual identity, of mental and social deviance in different historical contexts. With a change in content or professor, this course may be repeated.

HIS 455-459 INDIVIDUALS AND HISTORY (5) An examination of particular individuals and their roles in a society. Each time this course is offered it will focus upon a specific individual or group of individuals of a particular nation or culture during one historical epoch. With a change in content or professor, this course may be repeated.

HIS 460-464 LABOR HISTORY (5) (F) An examination of labor and workers and their impact upon historical events. Each time this course is offered it will focus upon specific problems of labor in particular nations or societies during the historical epoch. With a change in content or professor, this course may be repeated.

HIS 470-474 RELIGION IN HISTORY (5) (F,W) An examination of religious ideas and religious institutions in history. Each time this course is offered it will focus upon a particular church, religion, etc. With a change in content or professor, this course may be repeated.

HIS 475-479 EDUCATION IN HISTORY (5) (S) An examination of the concepts of childhood and process of social initiation in differing historical contexts. With a change in content or professor, this course may be repeated.

HIS 497-498 SPECIAL TOPICS (VAR) (F,W,S) A course designed to give groups of students an opportunity to pursue special studies not otherwise offered. Requires consent of the chairman.

HIS 499 INDEPENDENT STUDY (VAR) (F,W,S) Individual conferences, assigned readings, reports on independent investigations with the consent of the chairman.

HIS 599 INDEPENDENT STUDY (VAR) (F,W,S) Individual conferences, assigned readings, reports on independent investigations with the consent of the chairman.

## HUMANITIES MAJOR

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

*Required Courses:* None

*Recommended Courses:* art, foreign languages, philosophy, English, history, religion, drama, music.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* |
|---|---|
| *Required Courses:* | 60 |
| 15 quarter hours in each of 4 areas chosen from the following: English, Fine Arts, History, Modern Languages, Philosophy. | |
| *Electives:* | 30 |
| | 90 |

## INTERNATIONAL RELATIONS

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

*Recommended Courses:* Economics, foreign language, geography, history, international relations, introduction to statistics, political science, sociology.

UPPER DIVISION PROGRAM:

*Major:*

| | *Quarter Hours* |
|---|---|
| *Required Courses:* | 15 |
| INR 301 Foundations of International Relations<br>INR 334 World Regional Geography<br>INR 423 Approaches to International Relations | |
| *Breadth Requirements:* | 20 |
| At least one course in each of the following four fields: area studies (regional courses on Europe, the Caribbean, Latin America, Africa, Asia, or the Soviet Union); population studies or geography; international law and organizations; issues and problems in international relations. | |
| *Other Requirements:* | 10 |
| Ten additional credits in international relations or in approved internationally related courses from other departments or schools (for example: political science, economics, sociology, business, hotel, food, and travel) | |
| *Electives:* | 55 |
| Courses designed to meet particular professional goals. The student is | |

encouraged to consider a double major in related fields, to pursue courses in foreign languages and methodology, and to work toward appropriate academic certificates (i.e., Caribbean Studies, Latin American Studies)

*Minor:*

*Required Courses:* Any five lecture courses; 25 quarter hours

## COURSE OFFERINGS

INR 301 FOUNDATIONS IN INTERNATIONAL RELATIONS (5) An examination of the international political, economic, and social systems. Emphasis is placed on basic approaches to the study of international relations.

INR 312 ISSUES AND PROBLEMS IN INTERNATIONAL RELATIONS (5) Examines selected world and regional issues and problems. Topics vary according to the instructor.

INR 323 THE FUTURE OF THE INTERNATIONAL SYSTEM (5) Explores probable and improbable international futures through the use of simulations, gaming, and speculative literature. Focuses upon alternatives to present international arrangements.

INR 324 INTERNATIONAL ORGANIZATIONS (5) The study of international political, economic, and social organizations and their impact upon the relations between nations. Emphasis upon the constitution, voting, membership, security and operation of such organizations, and the settling of international disputes through these bodies.

INR 333 INTERNATIONAL RELATIONS OF THE MIDDLE EAST (5) An examination of the international social, economic, and political life of the Middle East. The role of oil in the region will receive special attention.

INR 334 WORLD REGIONAL GEOGRAPHY (5) A systematic survey of the major regions, and countries, of the world with regard to their physical, cultural, and political characteristics. Emphasis upon climate, natural resources, economic development, and population patterns.

INR 342 INTERNATIONAL RELATIONS OF LATIN AMERICA (5) An examination of international, social, economic, and political life of Latin America. Emphasis given to the role of international organizations, regionalism, and the trend toward economic unification.

INR 343 INTERNATIONAL RELATIONS OF EUROPE (5) An examination of the international, social, economic, and political life of contemporary Europe. Emphasis given to international organizations and the trend toward economic and political unification.

INR 344 INTERNATIONAL RELATIONS OF THE CARIBBEAN (5) An examination of the international social, economic, and political life of the Caribbean. Includes English, Spanish, and French speaking regions.

INR 345 POPULATION AND SOCIETY (5) Introduction to basic demographic concepts: fertility, mortality, migration, urbanization. Economic development, modernization and population change. Sources of data and background information; censuses, vital statistics, and their utilization.

INR 351 POPULATION AND GEOGRAPHY OF THE SOVIET UNION (5) An analysis of the U.S.S.R. in terms of its resources, economic development, and aspects of population change such as migration, urbanization, and nationality groups.

INR 352 POPULATION AND GEOGRAPHY OF AFRICA (5) Introduction to the physical, cultural, and political geography of Africa. Emphasis on the evolution of independent states, and economic development.

INR 356 TOURISM AND INTERNATIONAL AFFAIRS (5) An introduction to basic elements of international tourism; an inquiry into the trans-national influence of tourism as affected by its institutional organization, by the leisure traveler, and by the host national; and a review of opportunities for policy-making by the group, the State, international and global agencies.

INR 362 POPULATION AND GEOGRAPHY OF LATIN AMERICA (5) Introduction to the physical, cultural, and political geography of Latin America. Emphasis on population patterns and problems of population growth, systems of land use and tenure, economic development, natural resources, and agriculture.

INR 373 POPULATION AND GEOGRAPHY OF THE MIDDLE EAST (5) Introduction to the physical, cultural, and political geography of the Middle East, with special attention given to the State of Israel. Emphasis on population patterns, natural resources, and economic development.

INR 401 INTERNATIONAL RELATIONS, DEVELOPMENT, AND THE THIRD WORLD (5) An examination of the impact of the theory and practice of development and the relations between nations, with particular emphasis on the Third World. Attention given to the role of international political and economic organizations in the development process.

INR 407 INDEPENDENT STUDY (VAR)

INR 413 INTERNATIONAL RELATIONS AND INTERNATIONAL LAW (5) World order and international relations. Current trends in the theory and practice of international law. Progressive development of international law through international institutions in such matters as intervention, use of force, human rights, and the law of the sea.

INR 423 APPROACHES TO INTERNATIONAL RELATIONS (5) Analysis and conceptualization of the forces and background conditions which influence the relations among nations. Emphasis is on the provision of an analytical basis for the study of international relations. Prerequisite: INR 301 or permission of instructor.

INR 424 LAW AND THE PROCESS OF CHANGE (5) An exploration of the role of law and legal institutions in the process of modernization with particular emphasis on less-developed countries.

INR 425 TOPICS IN INTERNATIONAL LAW (5) An intensive examination of selected topics in international law and the relations among nations. Topics will vary according to the interests of the instructor and the students. Prerequisite: INR 413 or POS 339.

INR 444 CARIBBEAN REGIONAL RELATIONS (5) An examination of the forces and institutions contributing to or inhibiting cooperation and integration in the Caribbean. Prerequisites: INR 344, POS 307, ECO 408, or ECO 409.

INR 445 WORLD RESOURCES AND WORLD ORDER (5) An examination of the impact of the quantity and distribution of the world's resources upon the relations between nations. The availability of mineral resources and food, in particular, will receive attention, in addition to an assessment of the international economic and political implications deriving therefrom.

INR 453 ETHNICITY AND NATIONALITY: WORLD PATTERNS AND PROBLEMS (5) A systematic survey of multinational states and their current political and socioeconomic situations. The concept of ethnicity and its correlates. Conceptual basis of ethnic integration, assimilation, and stratification. The macro and micro scales: country, region, city, neighborhood. The consequences of modernization and economic development.

INR 456 WORLD POPULATION PROBLEMS (5) Analysis of problems of population growth, economic development, and food supply. The impact of population growth upon the world political system. The Green Revolution and its implications. Environmental consequences of population growth. Prerequisite: INR 345 Population and Society.

INR 461 TOPICS IN INTERNATIONAL RELATIONS (5) Varies according to the instructor.

INR 467 ALTERNATE TOURISM SCENARIOS AND STRATEGIES (5) A course for the student familiar with tourism in the context of international affairs; tourism as migratory aspect, tourism as international medium, tourism and the export of technology, tourism and national dependency, the marketing of globalism through tourism; others. The course includes a strategies laboratory.

INR 471 INTERNATIONAL COMMUNICATION (5) The course will explore language as the medium of national and international communication, in its multiple and often conflicting roles of unifier and isolator of political and social entities.

INR 518 INDEPENDENT STUDY (VAR)

INR 572 TOPICS IN INTERNATIONAL RELATIONS (5) Varies according to the instructor.

## LIBERAL STUDIES MAJOR

The purpose of the Liberal Studies Program is to expose the student to the broadest range of courses offered in the College while at the same time having the opportunity to pursue an individualized program of studies under the Liberal Studies guidelines. These guidelines comprise four categories of course listings: (1) *Periods: Ancient, Medieval, Modern,* including courses which will present perspectives on the historical development of civilizations and disciplines; (2) *Cultures: Western and Non-Western,* including courses which will present social and cultural patterns and processes of cultural, ethnic and national groups world wide; (3) *Ways of Knowing and Expression,* including courses which give the student frameworks or paradigms with which to organize, interpret, and understand insights and data from many disciplines; and (4) *Human Ecology,* including courses concerned with social, cultural, psychological, and biological adaptations of human beings to their environments.

Students are free to choose any combination of topics, courses, and/or disciplines while at the same time satisfying Liberal Studies requirements.

Under the advisement of the Director of Liberal Studies the student will be encouraged to pursue an individualized and focused program.

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

*Required courses:* none

*Recommended courses:* Arts and Sciences concentration recommended

UPPER DIVISION PROGRAM:

*Major:*

| | *Quarter Hours* |
|---|---|
| *Required courses:* | **50** |
| Courses offered by any of the units of the College of Arts and Sciences, chosen in accordance with academic guidelines of the Program of Liberal Studies, to meet requirements in the four following areas: | |
| Periods: Ancient, Medieval, Modern | 10 |
| Cultures: Western and Non-Western | 10 |
| Methods: Knowledge and communication | 10 |
| Human Ecology: Natural and Social Systems | 10 |

| | | |
|---|---|---|
| Interdisciplinary courses offered by the Liberal Studies Program or equivalent College courses approved by the Program of Liberal Studies | 10 | |
| *Electives:* | | **40** |

*Remarks:* If the student wishes to obtain a second major concurrently, no more than fifteen hour credits taken to meet the requirements of the other major may be counted towards the requirements of Liberal Studies. If he wishes to obtain a minor concurrently no more than ten hour credits taken to meet the requirements of the minor may be counted towards the requirements of Liberal Studies.

## COURSE OFFERINGS

LIS 450-59 LIBERAL STUDIES COLLOQUIA (5) Individual sections will study, from an interdisciplinary perspective, issues selected and presented jointly by College faculty. Specific topics will be announced in advance.

LIS 490-99 INDEPENDENT LIBERAL STUDY (VAR) Cross-disciplinary topics for individual study and research to be chosen by the student in consultation with his faculty advisor.

# MATHEMATICS MAJORS

### MATHEMATICS, STATISTICS, COMPUTER SCIENCE

DEGREE: *Master of Science in Mathematical Sciences.* Approval is pending for this degree. Contact the Chairman of the Mathematical Sciences Department for further information.

DEGREE: *Bachelor of Science*

### *MATHEMATICS

LOWER DIVISION PREPARATION:

*Required Courses:* calculus including multivariable calculus; introductory course in computer programming; linear algebra.

*Remarks:* If an entering mathematics major student has not met a lower division requirement, the equivalent course must be taken at the University, and will be counted as a non-major elective. The equivalent courses are: MAS 301-302-303 (Calculus), MAS 311 (Programming), and MAS 345 (Linear Algebra).

UPPER DIVISION PROGRAM:

*Major:*

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **45** |
| MAS 480 Algebraic Structures | 5 | |
| At least *two* of the following two-term sequences: | 10 | |
| MAS 331-332 Introduction to Mathematical Statistics | 10 | |
| MAS 425-426 Mathematical Methods in the Physical Sciences | 10 | |
| MAS 451-452 Real Analysis | 10 | |
| MAS 471-472 Mathematical Techniques of Operations Research | 10 | |
| MAS 480-481 Algebraic Structures | 10 | |
| MAS 521-522 Probability Theory | | |
| Additional MAS courses | 20 | |
| *Electives:* | | **45** |
| | | **90** |

*Remarks:* (1) If MAS 331-332 is not completed, MAS 335 must be taken as a non-major elective. (2) The student must consult his or her advisor at the University to determine which MAS courses, in addition to required courses specified above, satisfy the requirements for a mathematics major. (3) The student whose interests are more directly in statistics or computer science should consult those programs of study below.

*Minor:*

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* | | 35 |
| MAS 301-302-303 — Calculus I, II, III | 15 | |
| MAS courses approved for the Mathematics Major program | 20 | |
| | | 35 |

*Remarks:* No MAS courses can be applied to more than one minor nor can courses used to satisfy major requirements be used towards minor requirements. In the case where an MAS course is required for a major in one area and a minor in another, the student should see his or her advisor for an appropriate substitution for the requirements of the minor.

*Students interested in teacher certification see note on page 5.

## STATISTICS

LOWER DIVISION PREPARATION:

*Required Courses:* calculus including multivariable calculus; introductory course in computer programming; linear algebra.

*Remarks:* If an entering statistics major student has not met a lower division requirement, the equivalent course must be taken at the University, and will be counted as a non-major elective. The equivalent courses are: MAS 301-302-303 (Calculus); MAS 311 (Programming); MAS 345 (Linear Algebra).

UPPER DIVISION PROGRAM:

*Major:*

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* | | 45 |
| MAS 331 Introduction to Mathematical Statistics I | 5 | |
| MAS 332 Introduction to Mathematical Statistics II | 5 | |
| MAS 335 Introduction to Statistical Analysis I | 5 | |
| MAS 336 Introduction to Statistical Analysis II | 5 | |
| Additional statistical courses | 15 | |
| Additional MAS courses | 10 | |
| *Electives:* | | 45 |
| | | 90 |

*Remarks:* Statistics courses are listed under mathematical sciences (MAS). The student must consult his or her advisor at the University to determine which MAS courses, in addition to the required courses listed above, satisfy the requirements for a statistics major.

*Minor:*

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* | | 20 |
| MAS 331-332 Introduction to Mathematical Statistics I and II | 10 | |
| MAS 335-336 Introduction to Statistical Analysis I and II | 10 | |
| | | 20 |

*Remarks:* No MAS courses can be applied to more than one minor nor can courses used to satisfy major requirements be used towards minor requirements. In the case where an MAS course is required for a major in one area and a minor in another, the student should see his or her advisor for an appropriate substitution for the requirements of the minor.

## COMPUTER SCIENCE

LOWER DIVISION PREPARATION:

*Required Courses:* computer programming in assembly language and in some high level language.

*Remarks:* If an entering computer science major student does not have the equivalent background, he or she may be required to take some or all of the following courses as non-major electives: MAS 311 (Computer Programming); MAS 312 (Assembly Language Programming); MAS 315 (COBOL and Data Processing).

*Recommended Courses:* college algebra

*Remarks:* The student who has not taken college algebra should take MAS 317 Elementary Mathematics as his or her first mathematics course at the University.

UPPER DIVISION PROGRAM:

*Major:*

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **45** |
| MAS 321 Calculus for Management and Social Sciences | 5 | |
| *or* | | |
| MAS 301-302 Calculus I-II | 10 | |
| MAS 322 Statistics for Management and Social Sciences | 5 | |
| *or* | | |
| MAS 335 Introduction to Statistical Analysis | 5 | |
| MAS 375 Discrete Mathematics | 5 | |
| Additional computer sciences courses | 30 | |
| *Electives:* | | **45** |
| | | **90** |

*Remarks:* Computer science courses are listed under Mathematical Sciences (MAS). The student must consult his or her advisor at the University to determine which MAS courses, in addition to the required courses specified above, satisfy the requirements for a computer science major.

*Minor:*

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **25** |
| MAS 311*-312* Introduction to Computers I-II | 10 | |
| MAS 313 Advanced Programming Languages | 5 | |
| *or* | | |
| MAS 315* Introduction to Data Processing and COBOL | 5 | |
| MAS 377 Data Structures | 5 | |
| MAS 415 Systems Programming | 5 | |
| | | **25** |

*This course may be replaced by equivalent lower division coursework. However, a minimum of 20 quarter hours must be taken in computer science at the University, and must be selected from those courses approved for the computer science major program.

*Remarks:* No MAS courses can be applied to more than one minor nor can courses used to satisfy major requirements be used towards minor requirements. In the case where an MAS course is required for a major in one area and a minor in another, the student should see his or her advisor for an appropriate substitution for the requirements of the minor.

# COURSE OFFERINGS

MAS 300 INTRODUCTION TO COMPUTER PROGRAMMING (3) (F,W,S,SS) An introduction to the BASIC computer language and to the use of the interactive and batch facilities of the computer.

MAS 301-302 CALCULUS I-II (5-5) (F,W,S,SS) An introduction to the basic concepts, computations, and applications in the calculus. The first course deals with basic concepts, techniques and applications of the derivative and an introduction to the integral. The second course deals with integration techniques and applications of the integral, an introduction to multivariable calculus, infinite series, and Taylor series.

MAS 303 MULTIVARIABLE CALCULUS (5) (S,SS) This course deals with the differential and integral calculus of real valued multivariable functions. The topics include directional and partial derivatives, gradients, and their applications; differential calculus of vector valued functions; multiple, iterated, line, and surface integrals; Green's and Stokes' Theorems. Prerequisite: MAS 302 (or equivalent).

MAS 304-305/BUA 305 QUANTITATIVE METHODS FOR ADMINISTRATION I and II (5-5) (F,W,S,SS) The use of statistical tools in management. Starting with an introduction to probability, the course provides an introduction to a wide range of statistical techniques used in management sciences. It includes descriptive statistics, statistical inference, testing of hypotheses, regression and correlation analyses, and special topics such as construction of index numbers and time series analysis. The use of quantitative tools in management. Statistical methods, testing, and other quantitative applications to management are drawn together to provide tools for management efficiency.

MAS 307-308 INTRODUCTION TO STATISTICS I-II (5-3) (F,W,S,SS) A course in descriptive and inferential statistics. Topics include empirical and theoretical probability distributions, point and interval estimation, hypothesis testing, analysis of variance, regression, correlation, and basic non-parametric tests.

MAS 309 THE SIGNIFICANCE OF MATHEMATICS (5) (W) A course for non-science majors directed toward students with little or no assumed background in mathematics. The objective is to convince the student that mathematics is fun, interesting and useful. Topics may include: logical reasoning, unsolved problems of arithmetic, probability and statistics, geometry, topology, computers.

MAS 310 COMPUTERS AND SOCIETY (5) (S) A course for the citizen who is interested in the effects of computers upon our society. The major focus will be upon social, political and ethical considerations: what computers are; how they work; applications, such as data banks, government uses, simulation; considerations such as privacy and the police state, the cashless society, computers and business, computers and the quality of life, systems analysis and the planned society. The course is oriented toward the non-scientist and requires no background in mathematics, computer science, or social science. As part of the course, students will learn to write and run a simple computer program.

MAS 311 INTRODUCTION TO COMPUTERS I (5) (F,W,S,SS) A course in the fundamentals of digital computer programming. The concept of an algorithm; flow charting; programming; testing and debugging. Numerical and non-numerical techniques. The syntax and semantics of FORTRAN IV.

MAS 312 INTRODUCTION TO COMPUTERS II (5) (W,S) Principles and techniques of digital computers, with emphasis on machine language and assembly language programming. Internal representation of numeric and non-numeric information; registers, indexing and computer structure; arithmetic, logical and input-output instructions; fixed and floating arithmetic. Prerequisite: MAS 311 or equivalent.

MAS 313 ADVANCED PROGRAMMING LANGUAGE (5) (F,S) Examination of higher level, procedure oriented programming languages such as ALGOL 60, SNOBOL 4 and APL with emphasis on such concepts as recursion, dynamic storage, allocation, parallel structure operations, string manipulation, block structure and others of special significance to contemporary and future programming languages and techniques. Prerequisite: Lower division EDP major or MAS 311. Corequisite: MAS 312.

MAS 314/COT 302 COMPUTER HARDWARE FUNDAMENTALS (5) (W,SS) This course concentrates on two major areas. The first considers computer number systems, logic gates and Boolean algebra. The second treats the arithmetic element, computer memories, input-output and computer organization. Emphasis is placed on the latter topics. Prerequisite: MAS 375.

MAS 315 INTRODUCTION TO DATA PROCESSING AND COBOL (5) (S) A second course in programming oriented toward data processing applications. Various techniques for organizing and processing files: sequential random-access, indexed and inverted files. File sorting and maintenance. Program documentation. Instruction in the COBOL programming language. Applications of computers and data processing in business. Prerequisite: MAS 300 or MAS 311.

MAS 316 INTRODUCTION TO COMPUTERS AND COMPUTER APPLICATIONS (2) (F,W,S,SS) A survey of computers and their applications: hardware, software, computer system operation, advanced computer systems, acquiring and using computer power, systems analysis, computer impact on society. This course is designed to be taught to the community-at-large via TV. Not acceptable for credit to Mathematical Science majors (mathematics, computer science, statistics).

MAS 317 ELEMENTARY MATHEMATICS (5) (F,W,S,SS) The topics to be covered include a review of basic arithmetic operations; a review of elementary algebra such as addition, multiplication and simplication of algebraic expressions, solution of equations and inequalities, exponents; introduction to functions and graphs; exponentials and logarithms; trigonometric functions.

MAS 318 GEOMETRY (5) (W) A study of the basic structure of Euclidean Geometry together with topics from advanced Euclidean Geometry and non-Euclidean Geometry. Prerequisite: None.

MAS 319 INTRODUCTION TO COBOL PROGRAMMING (5) (F,W,S) Introduction to the basic notions of computer programming with emphasis on data processing applications. The syntax and semantics of basic COBOL are examined. Concepts in file organization and techniques for processing are introduced.

MAS 321 CALCULUS FOR MANAGEMENT AND SOCIAL SCIENCES (5) (F,S) An elementary introduction to the basic notions of calculus that are used to study problems in the management and social sciences. Specific topics include: differential calculus and its application to optimization problems; integral calculus with area and probability applications. Prerequisite: MAS 317 or working knowledge of algebra.

MAS 322 STATISTICS FOR MANAGEMENT AND SOCIAL SCIENCES (5) (W,SS) Introduction to the basic notions of probability and statistics that are used to study problems in the management and social sciences. Topics include: basic probability, random variables, sampling, estimation, hypothesis testing. Prerequisite: A course in college algebra or calculus.

MAS 325 DIFFERENTIAL EQUATIONS (5) (F,S) An introduction to differential equations and their applications based upon a knowledge of the calculus. Topics to include initial value problems of the first order, numerical solutions, systems of differential equations, linear differential equations of the second order, Laplace transforms, series solutions. Prerequisite: MAS 302. Corequisite: MAS 300 or MAS 311.

MAS 331-332 INTRODUCTION TO MATHEMATICAL STATISTICS I-II (5-5) (W,S) This course presents an introduction to the mathematics underlying the concepts of statistical analysis. It is based on a solid grounding in probability theory, and requires a knowledge of single and multivariable calculus. Specific topics include the following: basic probability concepts, random variables, probability densities, expectations, moment generating functions, sampling distributions, decision theory, estimation, hypothesis testing (parametric and non-parametric), regression, analysis of variance, and design of experiments. Prerequisite: MAS 303.

MAS 335-336 INTRODUCTION TO STATISTICAL ANALYSIS I-II (5-5) (F,W) This course presents a wide range of statistical tools which are usetul in the analysis of data. Stress is placed on where, when, and how these techniques are used. Computer and laboratory work is an integral part of the course. It is assumed that the student has had an introductory course in statistics or has had some exposure to calculus. Specific topics include: use of normal distribution, tests of means, variances and proportions, the analysis of variance and covariance (including orthogonal contrasts, components of variance models and analysis of experiments), regression, correlation, probability plotting, sequential analysis, non-parametric statistics and transformation techniques. Prerequisite: First course in calculus or first course in statistics.

MAS 338 STATISTICAL MODELS IN SCIENCE AND BUSINESS (5) (S) This course is a specialized course in the use of statistical models to represent physical and social phenomena. The emphasis is on providing tools which will allow a researcher or analyst to gain some insight into phenomena being studied. An introductory knowledge of probability theory and random variables is assumed. Specific topics include: introduction to discrete and continuous probability distributions, transformation of variables, approximation of data by empirical distributions, central limit theorem, propagation of moments, Monte Carlo simulation, probability plotting, and testing distributional assumptions. Prerequisite: MAS 303 and first course in statistics.

MAS 345 APPLIED LINEAR ALGEBRA (5) (F or S) An introduction to the topics in linear algebra most often used in applications. Topics include matrices and their applications, simultaneous linear equations and elementary operations, linear dependence, vector spaces, rank and inverses, inner products and "best" approximations, numerical solutions of simultaneous linear equations, eigenvalues and eigenvectors, iterative methods for calculating eigenvalues and systems of linear equations. Prerequisite: MAS 302 or MAS 321.

MAS 351 GRAPH THEORY (5) (W or SS) An introduction to the study of graphs. Topics include the following: Paths and circuits, connectedness, trees, shortest paths, networks, planar graphs, the coloring of graphs and directed graphs. Applications of graphs to computer science will be discussed. Prerequisite: MAS 311.

MAS 361-362 MATHEMATICAL MODELS AND APPLICATIONS I-II (5-5) (W,S) A course to provide an understanding of the use of the role of mathematical models in the description of the real world. In addition to considering basic principles in philosophy of formal model building, specific models will be considered, such as Markov Chain models, models for linear optimization, models involving stochastic processes, graphs and models, models for growth processes, and ecological models. Evaluation of models and computer simulation will also be discussed. Prerequisite: MAS 302 or MAS 321 or equivalent.

MAS 365 NUMERICAL ANALYSIS (5) (W,SS) Basic ideas and techniques of numerical analysis. Topics include finite differences, interpolation, solution of equations, numerical integration and differentiation, applications, introduction to applied linear algebra. This course will make extensive laboratory use of the computer facility. Prerequisites: MAS 300 or MAS 311 and MAS 302 or MAS 321.

MAS 375 DISCRETE MATHEMATICS (5) (F,W,S) An introduction to abstract mathematical structures with special emphasis on theories and methods which are relevant to the study of computer science. Topics include: introduction to formal systems and techniques of proof; combinatorial vs. relational structures; groups and graphs; Boolean algebras; abstract languages and machines. Prerequisite: MAS 311.

MAS 377 DATA STRUCTURES (5) (F,S) Basic concepts of data organization and associated techniques. Arrays, stacks, singly and multiply linked lists, binary and n-ary trees, graphs. Both internal and external storage structures. Accessing, searching and sorting. Recursive and non-recursive processing. Dynamic allocation and garbage collection. Prerequisite: MAS 311. Corequisite: MAS 312.

MAS 395 INDEPENDENT STUDY (1-5) (F,W,S,SS) Individual conferences, assigned reading, reports on independent investigations.

MAS 398 SPECIAL TOPICS (1-5) (F,W,S,SS) A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

MAS 401-402 FOUNDATIONS OF MATHEMATICS I-II (5-5) (F,W) An integrated course designed for teachers of Elementary and Early Junior High students. Emphasis will be placed on inductive and rudimentary deductive approaches to number systems, algebra, geometry, probability, statistics, and mathematical systems. The relationship between these fields and their applications will be stressed. Intuitive aspects of synthetic, analytic and transformation geometry will serve to relate geometry, algebra and mathematical systems. Prerequisite: None.

MAS 405 MATHEMATICAL LOGIC (5) (SS) A study of formal logical systems and their applications to the foundations of mathematics. Topics to be selected from the following: definition of mathematical proofs; set theory; analysis formalized with the predicate calculus; theorems of Godel and Church; recursive function theory, and idealized digital computers.

MAS 415 OPERATING SYSTEMS PRINCIPLES (5) (W,S,SS) A study of the basic principles of modern multi-programming and time-sharing systems. Interrupts and data channels, multiprocessor system, memory management, virtual memory, segmentation, process communication, deadlock and interlock handling. Prerequisites: MAS 314 and MAS 377.

MAS 416 DATA COMMUNICATIONS (5) (F) Study of communications-based systems, common carrier facilities, tariffs, and related equipment. Analysis and design of communications networks utilizing various techniques. Uses of communications for data collection, remote computing, message switching. Prerequisite: MAS 314.

MAS 417 MINICOMPUTER ARCHITECTURE AND APPLICATIONS (5) (W,SS) An introduction to minicomputers, in which students will have direct access to a general purpose minicomputer system. Study of the architecture of a particular minicomputer (including hands-on experience) followed by a comparison study of other minicomputer systems. Selected minicomputer applications in business, industry and science. Prerequisites: MAS 312 (or equivalent) and MAS 314.

MAS 418 COMPUTER GRAPHICS (5) (S) The principles and techniques of interactive computer graphics. Characteristics of graphical devices, representation and manipulation of graphical data, light pens and other graphical input devices, data structures for interactive graphics, grephical languages, applications of computer graphics. Prerequisites: MAS 314, MAS 321 and MAS 377.

HCM/MAS 419 QUANTITATIVE ANALYSIS FOR HEALTH CARE (5) (F,S) This course covers various techniques of health data analysis. Topics covered are chosen for and related to their practical and potential applications in the health area.

MAS 425-426 MATHEMATICAL METHODS IN THE PHYSICAL SCIENCES I & II (5-5) (W,S) A study of those topics in mathematics most often used in applications in the physical sciences. A prerequisite knowledge of ordinary differential equations is required. Topics to be discussed include the following: solutions to ordinary differential equations about singular points; Fourier Analysis, Sturm-Liouville Problems; Bessel Functions; Legendre Polynomials; boundary value problems; Laplace equations; applications to problems in the physical sciences. Prerequisite: MAS 325 or equivalent.

MAS 435 STATISTICAL QUALITY CONTROL (5) (SS) This course presents the simple but powerful statistical techniques employed by industry to improve product quality and to reduce the cost of scrap. The course includes the use and construction of control charts (means, percentages, number defectives, ranges) and acceptance sampling plans (single and double). Standard sampling techniques such as MIL STD plans will be reviewed.

MAS 437 PRACTICAL NONPARAMETRIC STATISTICS (5) (W or S) This course deals primarily with test of hypotheses for situations where standard parametric procedures (t-test, F-test, etc.) cannot be applied. Topics include binomial, multinomial and Poisson tests, permutation test, sign test, Mann-Whitney U test, Wilcoxon signed rank test, rank correlation, contingency chi-square, Kauskal-Wallis one-way ANOVA by ranks, Friedman Test and other non parametric test. Prerequisite: First course in statistics.

MAS 451-452 ADVANCED CALCULUS I-II (5-5) (W,S) An intensive study of the basic ideas of calculus. Topics include the following: real number sequences, series power, series expansion, continuity differentiability, integration and functions of several variables. Prerequisites: MAS 303 and MAS 345.

MAS 453 COMPLEX VARIABLES (5) (F) An introduction to complex variables beginning with the algebra and geometry of the complex number system. Topics include complex functions, analytic functions, Cauchy's theorem and its consequences, Taylor and Laurent series, residue calculus, evaluation of real integrals and summation of series, conformal mapping. Prerequisite: MAS 303.

MAS 465 TOPOLOGY (5) (S) An introductory course in topology requiring a prerequisite knowledge of the calculus. Topics to be discussed will be selected from the following: topological spaces, metric spaces, continuity, completeness, compactness, separation axioms, products spaces, subspaces, convergence, and homotopy theory. Prerequisite: MAS 303.

MAS 471-472 MATHEMATICAL TECHNIQUES OF OPERATIONS RESEARCH I-II (5-5) (S,SS) An introduction to those topics in mathematics associated with studies in operations research. Topics include the following: linear programming and related topics, dynamic programming, queuing theory, computer simulation, network analysis, inventory theory, decision theory, integer programming. Prerequisites: MAS 345 and MAS 322 or MAS 332.

MAS 475 THEORY OF COMPUTATIONS (5) (S) An introduction to abstract machine theory, combinatorial systems, and computable functions. Topics include: finite-state machines, regular sets, Turing machines, the halting problem, phrase-structure grammars and languages, and Post's correspondence problem. Emphasis is on surveying basic topics and developing an intuitive understanding of the theory of computation. Prerequisite: MAS 375.

MAS 480-481 ALGEBRAIC STRUCTURES I-II (5-5) (F,W) A course based on the knowledge of the calculus and linear algebra that is concerned with the fundamental concepts of algebraic structures. Topics include elementary number theory, groups, rings, fields. Concrete examples are used to introduce concepts of modern algebra. Special emphasis is placed on the ring of integers, congruences, polynomial domains and permutation groups. Prerequisite: MAS 345 or MAS 375.

MAS 495 INDEPENDENT STUDY (1-5) (F,W,S,SS) Individual conferences, assigned readings, reports on independent investigations.

MAS 496 MATHEMATICAL SCIENCES INTERNSHIP (VAR) (F,W,S,SS) A special program to encourage students to get guided on-the-job experience in computer sciences, statistics, or mathematics in an industrial enterprise, governmental agency, or other organization. Requirements: minimum grade of B or higher in all courses in the major area and approval by Departmental Internship Committee. Application is required at least one term in advance of registration for this course.

MAS 498 SPECIAL TOPICS (1-5) (F,W,S,SS) A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

MAS 501 MATHEMATICAL AND STATISTICAL MODELING (5) (F) Topics to be covered include regression models, forecasting and time series models, differential equation models and various statistical models. Computer solutions of these models will be included. Prerequisites: MAS 303, MAS 312, MAS 345, MAS 377, and MAS 332 or MAS 336.

BSC 502/MAS 502 APPLICATIONS OF COMPUTERS IN BIOLOGY (5) Introduction to computer techniques of great relevance to modern Biology and their application to the study of a representative group of biological problems. Prerequisite: MAS 311 or permission of instructor.

MAS 516 DATA BASE AND FILE ORGANIZATION (5) (W,S) This course deals with the need for formal data organization, the system requirements, effects of storage, devices, file attributes, file organization, search strategies, privacy and security. Prerequisites: MAS 314, MAS 321 and MAS 377.

MAS 518 PROGRAMMING SYSTEMS (5) (S or SS) Assemblers, loaders, MACRO systems, basic techniques of compilation, self-compilers, syntax encoding and recognition, code generation and optimization. Prerequisites: MAS 377 and MAS 415.

MAS 521-522 PROBABILITY THEORY I-II (5-5) (S,SS) This course is designed to acquaint the student with the basic fundamentals of probability theory. It reviews the basic foundations of probability theory covering such topics as discrete probability spaces, random walk, Markov Chains (transition matrix and ergodic properties), strong laws of probability, convergence theorems and law of the iterated logarithm. Prerequisite: MAS 303.

MAS 523 STOCHASTIC PROCESSES (5) (F) This course is intended to provide the student with the basic concepts of stochastic processes, and the use of such techniques in the analysis of systems. Subjects include Markov Processes, queuing theory, renewal processes, birth and death processes, Poisson and Normal Processes. Applications to system reliability analysis behavior science and natural sciences will be stressed. Prerequisite: MAS 522.

MAS 531 RELIABILITY ENGINEERING I (5) (SS) The course material is designed to give the student a basic understanding of the statistical and mathematical techniques which are used in engineering reliability analysis. A review will be made of the basic fundamental statistical techniques required. Subjects covered include: distributions used in reliability (exponential, binomial, extreme value, etc.), tests of hypotheses of failure rates, prediction of component reliability, system reliability prediction and reliability apportionment. Prerequisite: MAS 332.

MAS 532 RELIABILITY ENGINEERING II (5) (F) The course is designed for those interested in using probability models such as Markov matrices to analyze the reliability of systems. The use of transition matrices to represent the state of repairable and non-repairable systems will be stressed. Series and parallel constructed systems will be covered. Topics such as the reliability and availability of systems, average down time, required repairmen pool sizes, and number and composition of spare parts pools will be covered. Prerequisites: MAS 345 and MAS 531.

MAS 541 DESIGN OF EXPERIMENTS (5) (F or W) This is an applied course dealing with the design and analysis of experiments employed in scientific and industrial research. A knowledge of the basic fundamentals of hypothesis testing and analysis of variance is assumed. Topics include multiple comparison tests, completely randomized design, randomized blocks, latin square and related designs, nested and factorial experiments. Prerequisite: MAS 332 or MAS 336.

MAS 542 TOPICS IN DESIGN OF EXPERIMENTS (5) (W or S) This applied course in design of experiments covers topics such as split-plot design, confounding, fractional replication, incomplete block designs and response surface designs. Prerequisite: MAS 541.

MAS 543-544 REGRESSION ANALYSIS I-II (5-5) (SS,F) A comprehensive review of the role of linear models in statistics. Extensive use is made of matrix notation and a prior course in linear algebra is imperative. The fundamental theorems underlying regression analysis and the analysis of variance will be covered. Such topics as the Gauss-Markov Theorem, generalized least squares, estimation and testing of hypotheses will be covered. Prerequisites: MAS 332 and MAS 345.

MAS 571 MATHEMATICAL TECHNIQUES OF OPERATIONS RESEARCH (5) (W) This course covers topics in mathematics associated with studies in operations research. Topics include the following: Linear programming, network optimization techniques, queueing theory, probability inventory theory. Prerequisite: MAS 501.

MAS 580 NUMBER THEORY (5) (SS) This course takes up topics in number theory. It assumes a knowledge of the basic concepts of modern algebra. Topics to be discussed selected from the following: congruences, Diophantine Equations, p-adic numbers, algebraic number theory, class numbers, distribution of primes, continued fractions, and number theoretical explorations using the computer.

MAS 595 INDEPENDENT STUDY (1-5) (F,W,S,SS) Individual conferences, assigned reading, reports on independent investigations.

MAS 598 SPECIAL TOPICS (1-5) (F,W,S,SS) A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

MAS 601 SIMULATION AND MODELING (5) (S) Two areas are covered in this course: Advanced queueing models and simulation techniques. The relationships between these two areas, applications and simulation languages will be among the topics covered. Prerequisites: MAS 501 and MAS 571.



# MODERN LANGUAGE MAJORS

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

*Required Courses:* four semesters of elementary and intermediate foreign language.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* |
|---|---|
| *Required Courses:** | **45** |
| Foreign language | |
| *Electives:** | **45** |
| | **90** |

*Thirty quarter hours are required for the student enrolled in the Teacher Preparation Program. Students interested in teacher certification see note on page 5.

*Remark:* Completion of at least three quarters of a *second* foreign language will be recommended.

*Note:* The Department does *not* require any fixed sequence of courses (e.g. 325, 326, 327). A student may enroll in any course for majors provided he or she meets the course requirements (e.g. "Seniors", "Juniors", "Non-Native Speakers," etc.).

### LANGUAGE INSTRUCTION PROGRAMS

The Department offers a four-quarter and/or a five-quarter sequence of instruction in French, German, Herew, Italian, Portuguese and Spanish.

Courses numbered 301, 302, 303, 304 and 305 are open to any student, faculty or staff of Florida International University on a credit (5 quarter hours per course) or non-credit basis. The courses of the Language Instruction Program are designed primarily for persons wishing to acquire basic conversational ability in a foreign language, but they also provide training in all four language skills: listening, speaking, reading and writing. Students are advised to consult the Departmental Course Listing for specific sections of French, German, Hebrew, Italian, Portuguese, and Spanish. Contingent upon demand, the Department of Modern Languages will offer courses in Chinese, Japanese, Latin and Russian.

## LANGUAGE INSTRUCTION PROGRAM COURSES

301 BEGINNING LANGUAGE INSTRUCTION (5) Provides training in the acquisition and application of basic language skills. The student selects the *language prefix* appropriate to his or her needs: FRE 301, GER 301, HEB 301, ITA 301, POR 301, SPA 301.

302 INTERMEDIATE LANGUAGE INSTRUCTION I (5) Continuation of 301. Course emphasis is on comprehension, reading, and vocabulary. The student selects the *language prefix* appropriate to his or her needs: FRE 302, GER 302, HEB 302, ITA 302, POR 302, SPA 302.

303 INTERMEDIATE LANGUAGE INSTRUCTION II (5) Course emphasis is on communication and language refinement. The student selects the *language prefix* appropriate to his or her needs: FRE 303, GER 303, HEB 303, ITA 303, POR 303, SPA 303.

304 ADVANCED LANGUAGE INSTRUCTION (5) Open to the student with advanced intermediate ability in the foreign language. Course emphasis is on verbal skills, reading, and writing. The student selects the *language prefix* appropriate to his or her needs: FRE 304, GER 304, HEB 304, ITA 304, POR 304, SPA 304.

305 REVIEW GRAMMAR/WRITING (5) Open to non-native speakers with some previous knowledge of the language. Prerequisite: 304 or the equivalent. The student selects the *language prefix* appropriate to his or her needs: FRE 305, GER 305, HEB 305, ITA 305, POR 305, SPA 305.

## MAJOR COURSE OFFERINGS

*Note:* Courses do not have fixed content. FRE 406 — Genre Studies, may deal with the Modern Novel in the Fall Quarter and with the Seventeenth-Century Theatre in a subsequent academic quarter. Therefore, a student may repeat a course number at any time. The student is advised to consult the departmental Quarter Listing of Courses for specific sub-titles and descriptions.

The following courses, numbered 306-579, may be offered in French, German, Italian, Portuguese or Spanish towards fulfillment of the Upper Division Major, or may be taken as electives by qualified students. If a course using the MOL prefix is offered in more than one language in a given quarter, it will bear the appropriate prefix; e.g., FRE 325, SPA 325. Unless otherwise indicated, MOL courses will be taught in the foreign language.

MOL 306 STYLISTICS/EXPLICATION DE TEXTE (5) Close reading and analysis of prose and poetry. Introduction to the methods of literary criticism. Selected readings in international sources.

MOL 307 PHONETICS (5) The application of phonetic theory and practice for speech refinement. Study of sound patterns in communication and creative activity.

MOL 308 APPLIED LINGUISTICS (5) Examination of available linguistic materials for self-instruction. Problem-solving in syntax and phonetics through the application of modern/traditional methods. (In English)

MOL 309 INTRODUCTION TO GENERAL LINGUISTICS (5) Examination and synthesis of the concepts and perspectives of major contributions to language theory. (In English)

MOL 315 CREATIVE WRITING/TRANSLATION (5) Training through non-structured writing. Examination of various approaches to the problems and objectives of creative translation.

MOL 325 INTERMEDIATE SYNTAX/COMPOSITION (5) Practice in contemporary usage through selected readings in culture and civilization. Development of writing and speaking ability in extemporaneous contexts. The course will be conducted exclusively in the target language.

MOL 326 ADVANCED SYNTAX/COMPOSITION (5) Examination of grammatical theory; discussion of the modern essay. Practice in the detection and correction of errors in usage. The course will focus on current international events as content for informal talks and composition.

MOL 327 COMMUNICATION ARTS (5) Oral interpretation and dramatic reading. Original and non-original texts will be the content of the course. Study of shared modes of experience and their individual linguistic expression in an acquired language.

MOL 328 TRANSLATION SKILLS (5) Emphasis on basic principles and practical application.

MOL 335 HISTORY OF THE LANGUAGE (5) The internal and external history of language development. Examination of model texts from key periods of evolution.

MOL 336 DIALECTOLOGY (5) Definition and analysis. Problem-solving in dialect classification.

MOL 337 ROMANCE LINGUISTICS (5) The common and distinctive romance features. Survey of linguistic geography and internal/external influences.

MOL 355 INTELLECTUAL HISTORY (5) The interaction or dissociation among writers in a critical historical period. Study of primary sources and their contemporary evaluations.

MOL 356 LITERATURE OF REFORM (5) The consciousness of change in verbal art.

MOL 357 LITERATURE OF REPRESSION (5) The consciousness of constraints, their adoption and/or rejection in verbal art.

MOL 358 BI-CULTURAL WRITINGS (5) Experiment in linguistic pluralism. Content and focus to be determined by the international community.

MOL 359 PROSE AND SOCIETY (5) The dynamics of participation and alienation among prose writers and their environment.

MOL 360 CIVILIZATION I (5) Open to any student who understands the target language (French, Spanish, Portuguese, etc.) The development of a particular civilization. Emphasis on the evolution of a society, its ideas and its values.

MOL 365 LITERATURE IN TRANSLATION (5) Masterpieces of world literature in English. Comparative use of the original text. Discussion and interpretation.

MOL 397 SPECIAL TOPICS (5) Readings and discussion of literary/linguistic topics to be determined by students and teacher.

MOL 398 INDEPENDENT STUDY (5) Project, field experience, readings, or apprenticeship.

MOL 399 FOREIGN STUDY (15) Intermediate level. One quarter full-time credit in foreign residence and study. Individual cases will be evaluated for approval.

MOL 405 CREATIVE MODES (5) Discussion of a single mode or a plurality of epoch styles such as classical/baroque, realism/surrealism. The peculiar/common features of expressive media.

MOL 406 GENRE STUDIES (5) Examination of a single literary form (e.g., short story, poetry), or the study of interaction between literary types (e.g., novel and drama).

MOL 407 THE LITERARY GENERATION (5) The real and apparent shared ideals of an artistic generation; its influence and range.

MOL 411 LANGUAGE SKILLS FOR PROFESSIONAL PERSONNEL (5) The course is geared to the special linguistic needs of community groups (medical, business, technical, etc.).

MOL 428 PROFESSIONAL TRANSLATION (5) Techniques and resources for professional translation. Prerequisite: MOL 328.

MOL 438 PROBLEMS IN READING AND INTERPRETATION (5) The identification and appreciation of techniques for sensitive reading and discussion of literary texts.

MOL 455 SENIOR SEMINAR (5) Topic and approach to be determined by students and instructor.

MOL 460 CIVILIZATION II (5) Open to any student who understands the target language (French, German, Spanish, etc.) The making of a modern culture. The ideological, political and economic background of contemporary culture.

MOL 465 EUROPEAN LITERATURE IN TRANSLATION (5) For students proficient in more than one foreign language. Content and focus to be determined by students and teacher.

MOL 475 CONTRASTIVE PHONOLOGY (5) For students proficient in more than one foreign language. Choice of languages to be determined by students and teacher.

MOL 476 CONTRASTIVE MORPHOLOGY (5) For students proficient in more than one foreign language. Content and emphasis to be determined by students and teacher.

MOL 478 PROBLEMS IN LANGUAGE LEARNING (5) Primarily designed for prospective teachers but open to all interested students. The course will aim to devise an approach to difficulties in syntax, usage, reading and comprehension commonly experienced.

MOL 479 STUDIES IN BI-LINGUALISM (5) Readings and analysis of bi-lingual programs and bi-national goals.

MOL 497 SPECIAL TOPICS (5) (S) Independent readings, research, or project.

MOL 498 INDEPENDENT STUDY (5) (F,W,S,SS) Project, field experience, readings, or research.

MOL 499 FOREIGN STUDY: ADVANCED LANGUAGE/LITERATURE (15) Full-quarter credit for foreign residence and study/work. (Approval of Department)

MOL 501 LANGUAGE FOR READING KNOWLEDGE (5) Designed primarily for graduate students who wish to attain proficiency for M.A. and Ph.D. requirements. Open to any student who has no prior knowledge of the language.

MOL 502 LANGUAGE FOR READING KNOWLEDGE (5) Emphasis on translation of materials from the student's field of specialization. Prerequisite: MOL 501 or the equivalent.

MOL 505 SPECIAL TOPICS IN LINGUISTICS (5) Content to be determined by students and teacher. (Approval of Department).

MOL 506 GENRE STUDIES (5) Examination of a single literary form (e.g., short story, poetry), or the study of interaction between literary types (e.g., novel and drama).

MOL 510 COMPARATIVE STUDIES (5) Cross-over and distinctiveness in a multi-language problem, period, or esthetic.

MOL 515 SPECIAL TOPICS IN LANGUAGE/LITERATURE (5) Content and objectives to be determined by students and teacher.

MOL 527 COMMUNICATION ARTS (5) Oral interpretation and dramatic reading. Original and non-original texts will be the content of the course. Study of shared modes of experience and their individual linguistic expression in an acquired language.

MOL 528 TRANSLATION ARTS (5) Prerequisite: MOL 428. Techniques of professional translation.

MOL 537 ROMANCE LINGUISTICS (5) The common and distinctive romance features. Survey of linguistic geography and internal/external influences.

MOL 556 LITERATURE IN TRANSLATION (5) Masterpieces of world literature. Open to students who are proficient in more than one language.

MOL 558 BI-CULTURAL WRITINGS (5) Experiment in linguistic pluralism. Content and focus to be determined by the international community.

MOL 570 GRADUATE SEMINAR (5) Topic and approach to be determined by students and instructor. (Approval of the Department).

MOL 579 STUDIES IN BI-LINGUALISM (5) Readings and analysis of bi-lingual programs and bi-national goals.

# PHILOSOPHY, RELIGIOUS STUDIES AND INTERDISCIPLINARY: PHILOSOPHY AND RELIGIOUS STUDIES MAJOR

*Philosophy Major*

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

*Required Courses:* None.

*Recommended Courses:* Philosophy, Religion.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | 40 |
| Systematic Courses | 15 | |
| Historical Courses | 10 | |
| Other Philosophy Courses | 10 | |
| Philosophy Seminar | 5 | |
| Courses in One Other Discipline | | 20 |
| *Electives:* | | 30 |
| | | 90 |

*Remarks:* A more detailed description of the Philosophy Program and the identification of "systematic," "historical," and "other" philosophy courses together with course selection guidelines are contained in a brochure available at the Department of Philosophy and Religion. Students select their required courses in philosophy with the approval of a faculty member of the department.

Students are also encouraged to consider a "dual-major," and thus simultaneously meet the requirements of two academic majors. In this case, the twenty quarter hour credits required in one other academic discipline (as part of the philosophy major) would be met by courses taken towards the second major.

The College of Arts and Sciences requires for the bachelors degree that the student take a minimum of 10 quarter hours outside the department sponsoring their major program. For the different ways of meeting this requirement, please consult the department.

*Religious Studies Major*

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

*Required Courses:* None

*Recommended Courses:* Religion, Philosophy

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | 40 |
| Systematic Courses | 20 | |
| Scriptural Courses | 5 | |

| | | |
|---|---|---|
| Historical Courses | 5 | |
| Other Religious Studies Courses | 10 | |
| Courses in One Other Discipline | | **20** |
| *Electives:* | | **30** |
| | | **90** |

*Remarks:* A more detailed description of the Religious Studies Program and the identification of "systematic," "scriptural," "historical," and "other" religious studies courses together with course selection guidelines are contained in a brochure available at the Department of Philosophy and Religion. Students select their required courses in religious studies with the approval of a faculty member of the department.

Students are also encouraged to consider a "dual-major," i.e. simultaneously meet the requirements of two academic majors. In this case, the twenty quarter hour credits required in one other academic discipline (as part of the religious studies major) would be met by courses taken towards the second major.

The College of Arts and Sciences requires for the bachelors degree that the student take a minimum of 10 quarter hours outside the department sponsoring their major program. For the different ways of meeting this requirement please consult the department.

*Interdisciplinary: Philosophy and Religious Studies Major*

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

*Required Courses:* None
*Recommended Courses:* Religion, Philosophy

UPPER DIVISION PROGRAM:

For the aim and the requirements of this major, please consult the department. In general, the requirements of this major include courses from the series of PHR (Interdisciplinary Philosophy and Religious Studies) and selected courses from the PHI and REL series. Students select their courses with the approval of a faculty member of the department.

*Note:* The College of Arts and Sciences requires for the bachelors degree that the student take a minimum of 10 quarter hours outside the department sponsoring their major program. For the different ways of meeting this requirement, please consult the department.

*Minor in Philosophy:*

A student majoring in another academic discipline would earn an academic minor in philosophy by taking a pattern of at least four PHI courses (20 quarter hours), based upon an academic rationale or unifying study theme; approved by the chairperson of the department. An acceptable minor in philosophy would be four courses in one of the areas of systematic courses of four historical courses as designated in the course lists of the Philosophy Program. A student may propose still other patterns of four philosophy courses for a minor provided the selection is based upon an acceptable academic rationale.

*Minor in Philosophy-Religion:*

A student majoring in another academic discipline would earn an academic minor in philosophy-religion by taking a pattern of at least four PHR courses as follows: (1) Life Issues: PHR 300, PHR 310, PHR 400, PHR 401, PHR 426, or (2) Eastern Thought and Practice: PHR 300, PHR 310, PHR 311, PHR 315, or (3) a combination of four other courses from the PHI/REL/PHR series that is based upon a unifying study theme, and approved by the chairperson of the department.

*Minor in Religious Studies:*

A student majoring in another academic discipline would earn an academic minor in religious studies by taking a pattern of at least four REL courses (20 quarter hours), based on an academic rationale or unifying study theme, approved by the

chairperson of the department. An acceptable minor in religious studies would be four systematic courses, or four scriptural courses, or four historical courses, as designated in the Religious Studies Program. A student may propose still other patterns of four religious studies courses for a minor provided the selection is based upon an acceptable academic rationale.

Courses of the department offered *on-campus* are for the credit hours designated in the course description. Courses offered *off-campus* may be for less than the designated credit hours. Consult the department for exact credit information.

## COURSE OFFERINGS

PHI 300 INTRODUCTION TO PHILOSOPHICAL THINKING (5) This introductory course examines the presence of philosophy and the role of philosophizing in man's search for understanding of himself and of his world. It includes the study of the basic structure, the many applications and some basic issues of philosophical thinking, through a dialogue with those original sources more accessible for a first learning experience in philosophy and which represent basic events in the history of philosophizing.

PHI 301 LOGIC AND PROBLEM SOLVING (5) This introductory course in logical thinking and argumentation will treat both practical and theoretical approaches to understanding human communications and solving problems. Students will be introduced to inductive and deductive logic, fallacies, and the role of logic in scientific explanation and popular expression.

PHI 302 KNOWLEDGE, THINKING, AND CREATIVITY (5) The viewpoints of various philosophers and schools of thought regarding types of knowledge, certitude, and creativity are the main emphasis of this introductory course. The meaning of truth and truthfulness is analyzed from both the classical and the contemporary perspectives.

PHI 303 WHAT IS REALITY? (5) This introductory course examines basic metaphysical questions regarding the nature of reality, as well as the meaning of these questions for man's concept of himself and his world. Fundamental texts from classical and contemporary philosophers will be considered.

PHI 304 FUNDAMENTAL ETHICAL ISSUES (5) The possibility and validity of ethical knowledge and value systems will be considered in this introductory course. The ethical dimensions of such notions as pleasure, happiness, duty, responsibility for action and life style will be discussed in the context of several classical and contemporary problems and issues.

PHI 310 MYTH AND PHILOSOPHY (5) The course will be concerned with how Western myth and philosophy represent human life. This topic will be explored through a study of the emergence of philosophy out of myth, the relation of myth to science as the myth of science or the science of myth, and the possible submergence of philosophy back into myth.

PHI 311 ANCIENT PHILOSOPHIES (5) The basic concerns and teachings of representative philosophers and schools of thought, particularly in the Greek and Roman cultural settings, and linkages to their past and future are emphasized in this course.

PHI 312 MEDIEVAL PHILOSOPHIES (5) The basic concerns and teachings of representative philosophers and schools of thought in the cultural settings of the Middle Ages, and linkages to their past and future are emphasized in this course.

PHI 313 RENAISSANCE PHILOSOPHIES (5) The basic concerns and teachings of representative philosophers and schools of thought in the cultural settings of the Renaissance, and linkages to their past and future are emphasized in this course.

PHI 314 MODERN PHILOSOPHIES (5) The basic concerns and teachings of representative philosophers and schools of thought in the cultural settings of the 17th and 18th centuries, and linkages to their past and future are emphasized in this course.

PHI 316 CHINESE AND JAPANESE PHILOSOPHIES (5) This course will examine the main currents of Chinese and Japanese thought, with special focus on the quest of the Chinese people toward a more harmonious adjustment to their environment. The investigation will include consideration of the Confucian, Mohist, Taohist, Legalist and Zen Buddhist philosophies.

PHI 318 LATIN AMERICAN PHILOSOPHIES (5) This course will examine the development of Latin American thought, with particular attention to the 19th and 20th centuries. It will consider the traditions and initiatives of prominent Latin American philosophers in the light of problems such as personal and cultural identity.

PHI 319 AMERICAN PHILOSOPHIES (5) This course will examine the development of American philosophical thought, with particular attention to the 19th and 20th centuries. It will consider the traditions and initiatives of the prominent American philosophers in the light of problems such as the relationship between theory and practice.

PHI 320 HUMANISTIC AND SCIENTIFIC PERSPECTIVES (5) After a review of several basic philosophical notions, the assumptions, methodologies and consequences of the humanities and the social and natural sciences will be discussed. Topics will be selected from current issues.

PHI 324 PHILOSOPHIES OF RELIGION (5) This course will involve a study of the phenomena of religion as a means of identifying and evaluating its essential and universal element. Consideration will also be given to the relations between the enterprises of philosophy and religion. The result of these investigations will then be applied to specific topics examined by both disciplines.

PHI 325 PHILOSOPHIES OF SOCIETY (5) After an introduction to the various dimensions of social philosophy, in its relationship to other philosophical disciplines, to the social sciences and to social ideologies, this course will examine some of the fundamental questions raised by human experience regarding the origins, the purposes and types of society. The readings will be chosen from the works of contrasting major social thinkers.

PHI 326 PHILOSOPHIES OF EDUCATION (5) Notions of philosophy and education will be applied in the review of prominent philosophies of education. Special attention will be given to the development of the student's own philosophy of education, and to the importance of philosophical assumptions in curriculum designs and teaching strategies.

PHI 327 PHILOSOPHIES OF HISTORY (5) After exploring the definitions, dimensions and interrelations of philosophy and history, students will examine major philosophies of history. Discussions about the social responsibility of the historical narrative and the philosophical assumptions of historiographies will be provided.

PHI 328 PHILOSOPHIES OF SCIENCE (5) The philosophic background of scientific method will be examined. Attention will be given to the philosophical consequences of conceptual change in the sciences. Such topics as the growth and unity of science, explanation and prediction, and the role of science in society will be explored.

PHI 329 PHILOSOPHIES OF BEAUTY AND ART (5) An introduction to problems in aesthetics, with emphasis on those problems which are especially relevant to appreciation and criticism in the arts. Typical problems include the relation between form and content, truth and falsity in art, the nature of emotion in art and of the aesthetic response, as well as the nature of art itself. This course will include a study of selections from the writings of major thinkers and the consideration of those works of art which are relevant to this study.

PHI 401 FORMAL LOGIC (5) The emphasis of this course is on the theoretical properties of logical systems rather than on their use. The student will be introduced to a selection of advanced logical topics, including some of the chief results of modern logic (e.g. completeness of quantification logic). Prerequisite: An introduction to Logic such as PHI 301.

PHI 404 VALUE THEORIES (5) Several questions will be examined in this course in the context of classical and contemporary value theories. What is value? How are values known? What are the determinants of value? How do values differ from beliefs and attitudes? Are values relative?

PHI 410 NINETEENTH CENTURY PHILOSOPHIES (5) The basic concerns and teachings of representative philosophers and schools of thought in the cultural settings of the 19th century, and linkages to their past and future are emphasized in this course.

PHI 411 CONTEMPORARY PHILOSOPHIES (5) The basic concerns and teachings of representative philosophers and schools of thought in the cultural settings of the present century, and linkages to past and emerging generations are emphasized in this course.

PHI 414 ANALYTICAL PHILOSOPHY (5) This course examines the 20th century Anglo-American tradition whose aim is to solve philosophic problems by the methods of linguistic analysis. It will include study of techniques of linguistic analysis and an evaluation of their adequacy in dealing with meaning and truth, the mind-body problem, and free will.

PHI 415 MODERN EXISTENTIALISM (5) This course examines the origin, the basic philosophical insights, and the influence of the mainstreams (French, German, Russian, Spanish) of modern existentialism.

PHI 416 PHENOMENOLOGY (5) This course analyzes the method, the basic philosophical insights and the applications of contemporary (German and French) phenomenological thinking. It will include both the experiencing of phenomenological awareness (of freedom, of knowledge, of encounter) and the study of original texts.

PHI 418 MARXISM (5) This course examines the philosophic insights of Marx and the main trends (enthropological, social, existential) in contemporary Marxism. It includes an analysis of the Marxist interpretation of alienation, work and human authenticity.

PHI 420 ETHICAL ISSUES IN BUSINESS (5) After a review of basic questions regarding ethical knowledge, norms and systems, students will consider the ethical dimensions of current problems and issues facing the business manager or worker: corporate decisions, personal responsibility, product quality and performance, production, marketing and advertising, management and in general economic rationality.

PHI 421 ETHICAL ISSUES IN POLITICS (5) After a review of basic questions regarding ethics, politics and their relationship, students will consider with historical perspective some fundamental currents and alternatives in the field of political ethics, and then will examine the ethical dimension of some contemporary issues facing the citizen, the public servant and the political leader, such as credibility, technocracy, conflict of interest and violence.

PHI 422 BIOMEDICAL ETHICS (5) After examining the foundations of ethics, this course will consider the human and ethical dimensions of current issues in the life sciences, such as the meaning of human living and suffering, ethics of genetic control, death and dying, personal responsibility in the medical and counselling professions.

PHI 427 CHANGE AND ORDER IN SOCIETY (5) This course will examine the dimensions of change and order in contemporary societies, developed and underdeveloped, with particular attention to the human values involved, in the light of different philosophical theories and socio-political ideologies.

PHI 430 PHILOSOPHY OF LANGUAGE (5) This course examines the phenomenon of language as an integral part of human culture and as the way of human encounter. It includes the contemporary structural and phenomenological analysis of the meaning of language, the power and limitations of speech, the relationship between thought and language, the non-rational thought process and its influence upon rational thought and language, and the power and magic of the word.

PHI 431 PHILOSOPHY OF DIALOGUE (5) This course examines the meaning, the foundations, and the limitations of dialogue and the dialogical structure of the phenomena of expression, communication, education and human relationships. It includes a contemporary philosophical analysis of the dialogical principle and the application of its insights to the problems of human living and knowing.

PHI 435 PHILOSOPHY OF DEATH (5) (S) This course analyzes the meaning of death and man's attitude towards death and the dying. It examines how philosophy can share in the new confrontation between man and his death, and shows the ways philosophical thinking contributes to the discovery of an authentic attitude towards the phenomenon of death as part of human living.

PHI 440 PHILOSOPHY IN LITERATURE (5) This course will examine modern philosophical currents as seen in the works of pertinent literary figures, such as Tolstoy, Dostoevsky, Conrad, Kafka, Koestler, Camus and Mann. Certain basic themes resulting from the merging of aesthetic value and philosophic reflection will be examined: the self, alienation, history, the absurd, time and death.

PHI 445 PHILOSOPHIC PROBLEMS IN THE SCIENCES (5) Selected philosophic problems will be explored, drawn either from the natural sciences or from the social sciences. In the latter case the course will be considered as equivalent of SOC 493 — *Basic Assumptions of Sociology,* for students majoring in programs of Sociology and Anthropology.

PHI 490 INDEPENDENT RESEARCH (VAR) Topics will be selected to meet the academic needs of the individual student.

PHI 495 PHILOSOPHY SEMINAR (5) This seminar is designed for majors and other qualified students approved by the Department, and will be guided by one or more faculty members. The specific topic will be selected and announced in advance. The number of participants will be limited.

PHI 591 SPECIAL TOPICS (5) Topics will be selected to meet the academic needs of groups of students.

## RELIGIOUS STUDIES

REL 300 RELIGION AND LIFE STORIES (5) An explanation of the nature of religious experience as it appears in the life stories of individuals. The course will include the life stories of the initiators of the great world religions as well as those of contemporary persons. The student will be encouraged to explore his own life story in the light of this prior discussion.

REL 301 WHO IS GOD? (5) This course will trace the idea of God from primitive culture through Greek, Hebrew and Christian thought to the contemporary situation. The various responses to the question of God given by particular groups in modern society will be examined in order to see the relevance of these responses for current issues and life styles.

REL 303 HUMAN RELIGIOUS EXPERIENCE (5) A phenomenological comparison between the religious experiences of primitive man and modern man will cover the first part of this course. The second part will investigate the psychological motivations in the religious experience of contemporary man. Finally, the inner dynamics in the development of a mature religious attitude will be examined.

REL 304 BASIC DILEMMAS IN FAITH AND REASON (5) This course examines the nature and boundaries of faith and reason, contemporary atheism, and the religion-science relationship, from the religious perspective. It deals with the need to achieve a coherent and human grasp of personal living and reality.

REL 305 REVELATION AND SCIENCE (5) This course will explore science and revelation as basic avenues to knowledge of ultimate significance in an effort to discover their respective underlying assumptions. In response to those who raise questions about religious beliefs in ways that demand evidence and reasons, it will then discuss such sources of revelation as scripture, prophecy, incarnation, miracle, natural order, religious experience and mysticism.

REL 306 FAITH AND ETHICS (5) This course will examine the nature of ethics in its relationship to faith orientation. After considering the various religious foundations of ethics in the thought of influential ethical thinkers, attention will be given to the application of these perspectives to pressing ethical problems in contemporary society.

REL 309 MAN: THE SYMBOL MAKER (5) The meaning of human language, myth, symbols and rites in connection with the religious experience of man will be explored in this course Special emphasis will be placed on the existential, social, and religious values of the rites of initiation, communion, and marriage.

REL 310 BIBLICAL WRITINGS AND THOUGHT (5) An introductory survey of the Old Testament from the points of view of historical background, the cultures in which the works were written and the ideas they contain. Emphasis will be given to the relevance of biblical themes for the contemporary situation.

REL 312 THE PROPHETS (5) What is a prophet? This course will attempt to answer this question both in terms of the classic Hebrew prophets, whose acts and words are preserved in the Old Testament, and the nature of the prophetic vocation in the contemporary world.

REL 315 JESUS IN HIS AND OUR TIMES (5) This course is a study of the life of Jesus through an examination of his acts and words as recorded by his contemporaries in the New Testament. Attention will also be given to the interpretation of Jesus' message by theologians and others as they seek to relate him to the modern world.

REL 317 THEOLOGY OF PAUL (5) This course will survey the life and times of Paul as a prelude to an indepth study of this primary Christian thinker. Attention will be given both to the sources of his thought and to its contemporary relevance.

REL 320 RELIGIONS OF THE WORLD (5) Introduction to the major faiths of mankind. Included in the discussion will be Hinduism, Buddhism, Taoism, Islam, Judaism and Christianity. The course will involve a comparison of common elements in these major religions while respecting their distinctive features.

REL 323 JUDAISM (5) This course is an introduction to this major world religion. Following a survey of the history of Judaism, major themes in Jewish religious thought will be highlighted, especially as they relate to modern movements of this faith.

REL 326 EARLY CHRISTIANITY (5) This course will survey the development of Christian thought and practice from its beginnings as a primitive church to its establishment as a major faith in the Middle Ages. It will then consider the relevance of this early experience for modern movements of this faith.

REL 328 REFORMATION (5) The lives and thoughts of the leaders of the Protestant Reformation will be the focus of this course. Significant attention will be given to the perennial personal experiences and theological perspectives which directed the actions of such persons as Luther, Calvin, Zwingli and the movements they founded.

REL 329 MODERN CHRISTIANITY (5) This course will survey the basic beliefs of Christian doctrine in its more modern and existential insights. And for this purpose will take into consideration the social, cultural and scientific revolution associated with the thinking of Hume, Darwin, Marx and Freud and other thinkers who furnish the background for the emerging newer understanding of Christian faith.

REL 330 ISLAM AND ISLAMIC MYSTICISM (5) The study of Islam as a major world religion in terms of its history, scripture, and practice. Emphasis will also be given to the various types of mysticism associated with Islam and to modern movements of this faith.

REL 340 JUDAIC PRAYER (5) This course will examine the nature and place of prayer in modern Judaism. After a survey of the place of prayer in the life and history of ancient Israel as reflected in Hebrew Scriptures and Rabbinic writings, attention will be focused on the teachings concerning prayer and its practice in contemporary Jewish worship and spirituality.

REL 350 MARRIAGE (5) This course will explore what resources for a renewed contemporary understanding of marriage may be found in the religious biblical perspectives. The social psychological and spiritual dimensions of marriage will be considered in the development of the course.

REL 400 NEW OPTIONS IN RELIGIOUS EXPERIENCE (5) An examination of the methods for studying religious experience will be followed by an application of the results to the numerous types of religious phenomena currently being promoted in our culture. These include Witchcraft, Zen, pentecostalism, drug experience, revivals, Jesus people, Hare Krishna, and spiritualism.

REL 401 GOD, WORLD AND PROCESS (5) The Process thought of the school founded by Alfred North Whitehead is a widely respected attempt to make the concept of God understandable to the rational and empirical modern mind. This course will examine the important religious implications of Process Thought.

REL 403 WHY SUFFERING AND EVIL? The problem of evil is as perennial as it is perplexing in religious thought. This course will examine the major theological responses to the problem of evil and the fact of suffering in order to ascertain their adequacy and relevance of these responses for today.

REL 405 ISSUES IN RELIGION AND SCIENCE (5) An examination of the relationships between the perspectives of religion and science and the consequences of these relationships for our time. A different major topic will be selected and announced each time the course is offered.

REL 406 RELIGIOUS VALUES AND TECHNOLOGY (5) A study of religious value systems of modern programs of technology will be undertaken for the purpose of evaluating these systems and using them most fully in constructing a human world.

REL 420 CONTEMPORARY JUDAIC-CHRISTIAN RELIGIOUS THOUGHT (5) This course will examine contemporary issues facing Judaism and Christianity, such as formulation of faith, institutional identity, liturgical prayer, ecumenism, marriage and social commitment. It will consider comparatively the manner in which Jewish and Christian theologians of today meet these issues.

REL 426 CONTEMPORARY LATIN AMERICAN RELIGIOUS THOUGHT The major trends of religious thought in Latin America and their impact on the society of the area will be investigated. Special reference will be made to Post-Vatican II theology and to very recent theologies of liberation.

REL 429 STUDIES IN RELIGIOUS THINKERS (5) A major religious thinker or school of thought will be examined in depth or compared with another major perspective. Possible figures include: Augustine, Aquinas, Luther, Calvin, Kierkegaard, Buber, Heschel, Barth, Tillich, Teilhard and Altizer. The specific thinkers or school of thought will be selected and announced in advance.

REL 435 INSTITUTIONAL RELIGION IN NORTH AMERICA (5) This course will examine the patterns and development of organized religion in North America. Of special interest will be an assessment of emerging changes in religious institutions with regard to their norms and social relevance. For example, the contrast between the more spontaneous and less structured movements and the more established institutional forms will be pursued.

REL 445 WESTERN MYSTICS (5) This course considers the roots and development of western mysticism, including contemporary expressions of the same, through a direct analysis of selected works of major mystics. On this basis, the course will attempt to identify synthetically the essential characteristics of mystical experience.

REL 450 THE END? (5) What happens after death? This course will explore the various answers to this question given by contemporary theologians and thinkers.

REL 490 INDEPENDENT RESEARCH (VAR) Topics will be selected to meet the academic needs of the individual student.

REL 495 RELIGIOUS STUDIES SEMINAR (5) This seminar is designed for majors and other qualified students approved by the Department, and will be guided by one or more faculty members. The specific topic will be selected and announced in advance. The number of participants will be limited.

REL 591 SPECIAL TOPICS (5) Topics will be selected to meet the academic needs of groups of students.

## INTERDISCIPLINARY: PHILOSOPHY AND RELIGIOUS STUDIES

PHR 300 MEANING OF LIFE (5) This introductory course examines the convergent and divergent views of philosophies and religions regarding the meaning of life. Special emphasis is given to the variety of strategies available to the individual in the personal search for such meaning.

PHR 310 EASTERN PHILOSOPHICAL AND RELIGIOUS THOUGHT (5) This introductory course examines the development of philosophical and religious thought in the East, from ancient to modern times. Hinduism, Buddhism, Confucianism, Taoism and other major viewpoints will be considered, in themselves and in comparison with Western forms of thought.

PHR 311 INDIAN THOUGHT (5) Major schools and works will be examined showing the development of Indian thought from Hinduism through Buddhism. Emphasis will be placed on metaphysical and epistemological problems in Buddhism. Some historical relationships between the basic values of Buddhism and the diverse cultural, social and political forms in which they have been expressed will also be studied.

PHR 315 YOGA (5) The ancient techniques of "Hatha Yoga", relaxation and breathing, leading to meditation, mastership of self and inner peace will be the content of this course. The course will be both theoretical and practical, with major emphasis on the latter.

PHR 400 LOVE AND SEXUALITY This course examines the different philosophical approaches to love and sexuality and studies the basic problems in human sexual living, such as love and the man-woman relationship, the formation of sexual union, and attitudes toward love and sexuality in contemporary society.

PHR 401 HUMAN IDENTITY (5) This interdisciplinary course will explore the philosophical, religious and psychological views on personhood. Several questions will be examined: What constitutes personhood? What is the self-concept? What does it mean to be an authentic person? How free is any person.

PHR 410 PERSPECTIVES ON SOCIAL ISSUES (5) This course will examine contemporary issues that have a religious/philosophical dimension. The specific topic(s) and perspective(s) will be selected and announced in advance.

PHR 426 MAN AND NATURE (5) This course examines the philosophical understanding of nature and of man's relation to nature as his environment. It will explore the humanistic perspectives of both the scientific and the philosophical interpretations of nature and environment. It will also deal with the diverse influence of technology and social organizations on the quality of human living through their impact on man's environment.

PHR 435 PEACE AND SOCIETY (5) Students will survey several cogent international questions and issues from the point of view of philosophical and religious thought: socio-political forces underlying peace/unrest, impact of social protest upon the ethical and political values of various cultures, the ideology and efficacy of non-violence, the economic and social costs of national defense/war/peace. Major Eastern and Western peace documents will be examined.

PHR 490 INDEPENDENT RESEARCH (VAR) Topics will be selected to meet the academic needs of the individual student.

PHR 495 INTERDISCIPLINARY SEMINAR (5) This seminar is designed for majors and other qualified students approved by the Department, and will be guided by one or more faculty members. The specific topic will be selected and announced in advance. The number of participants will be limited.

PHR 591 SPECIAL TOPICS (5) Topics will be selected to meet the academic needs of groups of students.

The Department of Philosophy and Religion also participates in the Continuing Education Program of the University and thus serves the community and professional groups by offering several courses off-campus. For further information concerning these courses (e.g. credit hours, courses not listed in the catalog) consult the Department.

# PHYSICAL SCIENCES

**PHYSICS, CHEMISTRY, EARTH SCIENCES, ENVIRONMENTAL STUDIES MAJORS**

## PHYSICS

DEGREE: *Bachelor of Science* *Students interested in teacher certification see note on page 5.

LOWER DIVISION PREPARATION:

*Required Courses:* part of the 90 quarter hours (60 semester hours) of lower division coursework should be in the sciences.

*Recommended Courses:* algebra and trigonometry; chemistry (10 quarter hours); physics with or without calculus; calculus (10 quarter hours). All but the algebra and trigonometry courses may be taken at the University.

UPPER DIVISION PROGRAM:

*Major:*

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **55** |
| PHY 340 Modern Physics | 5 | |
| PHY 415-416 Electromagnetism | 10 | |
| PHY 410 Classical Mechanics | 5 | |
| PHY 411 Statistical Thermodynamics | 5 | |
| PHY 407 Senior Physics Laboratory | 5 | |
| PHY 420 Quantum Mechanics | 5 | |
| Electives in experimental or theoretical physics | 15 | |
| Math elective beyond 10 quarter hours of calculus | 5 | |
| *Electives:* | | **35** |
| | | **90** |

*Minor:* Two minors are available to students. *Track A* is designed for the student who plans to take the introductory physics sequence PHY 301-302-303 or its equivalent. *Track B* is designed for the student who plans to take the introductory sequence PHY 305-306 or its equivalent.

| | *Quarter Hours* | |
|---|---|---|
| *Track A:* | | **30** |
| PHY 301-302-303 Physics with Calculus | 15 | |
| PHY 340 Modern Physics | 5 | |
| Additional approved courses | 10* | |
| | | **30** |

| | | |
|---|---|---|
| *Track B:* | | **30** |
| PHY 305-306 Physics without Calculus | 10 | |
| PHY 340 Modern Physics | 5 | |
| Additional approved courses | 15* | |
| | | **30** |

*approval of physics advisor

*Remarks:* No *D* grades will be allowed in the courses required for the major. This rule includes required courses outside the discipline.

## COURSE OFFERINGS

PHY 301-303 PHYSICS WITH CALCULUS (5-5-5) (F-W-S; W-S-SS) Basic physics sequence for students that have had mathematics through calculus. PHY 301 will cover kinematics, Newton's laws, conservation of linear and angular momentum and gravitation. PHY 302 continues with fluid dynamics, sound, thermodynamics, and optics. PHY 303 covers electric fields, magnetic fields, and electromagnetic waves. Calculus may be taken concurrently.

PHY 301L, 302L, 303L JUNIOR PHYSICS LABORATORY (2-2-2) (F-W-S) Laboratory section of Physics 301-303. This may be taken separately.

PHY 305, 306 PHYSICS WITHOUT CALCULUS (5-5) (F-W; S-SS) Introductory physics for students without calculus. The same material is presented as in PHY 301-303, but with less mathematical sophistication. Not for B.S. physical sciences majors.

PHY 307 OBSERVATIONAL ASTRONOMY (2 Variable) (F) A study of astronomical objects visible from Miami: stars and their constellations, planets, binary stars, star clusters, variable stars, nebulae and galaxies will be among the objects discussed and observed.

PHY 309/EAS 309 MODERN ASTRONOMY (5) (F) The structure and evolution of our solar system is studied with particular emphasis on physical concepts. Topics will include astronomical coordinate systems, celestial mechanics, the earth's motions and a description of the solar system. Prerequisites: college algebra and geometry.

PHY 310/EAS 310 MODERN ASTROPHYSICS (5) (W) An introduction to the structure of stars and galaxies and the evolution of the universe as a whole. Topics will include atomic spectra, stellar classifications, galactic structure and cosmology. Prerequisites: PHY 301-303, Calculus I and II, and PHY 309.

PHY 315 CONCEPTS IN PHYSICS (5) (S) Self contained course for liberal arts majors covering the major concepts in physics; necessary concepts of elementary algebra and geometry will be covered in the beginning of the course and used to discuss Newtonian, relativistic, and quantum mechanics and their applications to atoms, stars and the universe as a whole. Throughout the course the dynamic nature of scientific laws will be stressed as new, more general laws are first hypothesized and then used to predict and eventually cross new frontiers of physics.

PHY 321/CHE 321 THERMODYNAMICS (5) (F) Same as CHE 321. Fundamental principles of thermodynamics; the first, second, and third laws, free energy, entropy, the chemical potential, phase rule and its applications. The first in a three-quarter physical chemistry sequence. Prerequisites: general chemistry, general physics, and mathematics through Calculus II. Calculus II may be taken concurrently.

PHY 322 OPTICS (5) (W) General formulation of geometrical optics including matrix techniques, interference phenomena, and the theory of Fraunhofer and Fresnel diffraction will be among the topics covered.

PHY 340-341 MODERN PHYSICS (5-5) (W-S) Recent developments in physics are discussed. Subject matter includes: review of classical physics, special relativity, four-vectors, particle aspects of waves, wave aspects of particles, the hydrogen atom, many electron atoms, nuclear instrumentation, nuclear structure, nuclear reactions, elementary particles, introduction to quantum mechanics and solid state physics.

PHY 351 EARTH PHYSICS (5) (W) The planet earth treated as a physical system. The formation and structure of the earth will be discussed, as well as current dynamic changes.

PHY 352 ELECTRONICS (5) (SS) Including solid state theory and the theory of circuits. Circuit operation and design in lecture and laboratory sessions.

PHY 356L/CHE 356L INTRODUCTION TO SCIENTIFIC INSTRUMENTATION (5) (W) The student learns to set up and operate such standard pieces of laboratory apparatus as bridges, amplifiers, oscilloscopes, frequency counters, flowmeters, and thermocouple circuits utilizing chart recorders. A background in general physics is recommended.

PHY 361 FRONTIERS OF PHYSICS (5) (F) An introduction on an elementary level to developments in physics in the 20th century. The subjects covered will include relativity, atomic and molecular structure, solid state physics, the laser, nuclear structure, particle physics and astrophysics.

PHY 362 PHYSICAL ASPECTS OF UNSOLVED MYSTERIES (5) (W) Topics peripheral to orthodox science such as UFO's, attempts to communicate with alien beings, the theories of Velikovsky, Stonehenge, and psychic phenomena are presented for discussion. Emphasis is on physical ideas, scientific reasoning, and the interplay between theory and experiment.

PHY 407L, 408L, 409L SENIOR PHYSICS LABORATORY (5-5-5) (F-W-S) Advanced laboratory topics are treated. Modern physics laboratory equipment is used, and the student is introduced to current physics laboratory practice.

PHY 410 CLASSICAL MECHANICS (5) (W) Newtonian mechanics including statics of particles, cables and rigid bodies, dynamics of particles and groups of particles in three dimensions and motion of a rigid body in a plane. A background in general physics is advisable.

PHY 411/CHE 406 STATISTICAL THERMODYNAMICS (5) (F) Review of the fundamental laws of thermodynamics applied to simple systems. Elementary kinetic theory of gases applied to diffusion, viscosity, thermal and electrical conductivity. Boltzmann, Fermi-Dirac and Bose-Einstein distribution functions applied in the Boltzmann limit to the calculation of thermodynamic variables. Prerequisites: general chemistry, general physics, and mathematics through Calculus II.

PHY 415, 416 ELECTROMAGNETISM (5-5) (F-W) The theory of electromagnetic fields and waves is developed from basic principles. Vector calculus, Coulomb's law, Gauss's Law, Electrostatic potential, dielectrics, solutions to LaPlace's and Poisson's equations, magnetic induction, vector potential, magnetic scalar potential, Faraday's law, magnetic materials, Maxwell's equations and propogation of waves in space and various media are discussed. Prerequisite: Calculus.

PHY 420 QUANTUM MECHANICS I (5) (S) An introduction to the basic postulates of quantum mechanics. Solutions to the time independent Schrodinger equation are obtained for particles in one dimensional potential wells, the hydrogen atom solutions and the harmonic oscillator problem. Prerequisites: general chemistry, general physics, and mathematics through Calculus II.

PHY 421 ADVANCED MECHANICS (5) (SS) A continuation course in classical mechanics which leads naturally into quantum mechanics. Topics to be covered will include Lagrangian and Hamiltonian methods, variational techniques, Poisson brackets, symmetries, algebra of quantum mechanics, representations, Dirac ladder operations, spin, and the hydrogen atom.

PHY 430 PHYSICS OF FLUIDS (5) (S) Introduction to the constitutive equations of Fluid Mechanics. Topics in steady compressible and incompressible flows. Prerequisites: Classical Mechanics and Thermodynamics or consent of instructor.

PHY 440/CHE 440 SOLID STATE PHYSICS (5) (S) Crystalline form of solids, lattice dynamics, metals, insulators, semi-conductors, and dielectric materials. Prerequisites: general chemistry, general physics, and mathematics through Calculus II.

PHY 451 NUCLEAR PHYSICS (5) (S) A treatment of the current state of the nuclear theory problem and a discussion of modern experimental methods.

PHY 481, 482, 483 INTRODUCTION TO PHYSICS RESEARCH (5-5-5) (F-W-S-SS) Students are introduced to research techniques by assisting with an original investigation in experimental or theoretical physics.

PHY 491-492-493 INDEPENDENT STUDY (VAR) (F-W-S-SS) The student will work under the supervision of a faculty member on subject material of mutual interest.

PHY 501 THEORETICAL PHYSICS (5) (S) The theoretical foundation of classical mechanics, relativity, fields, quantum mechanics, group theory and relativity.

PHY 591-592-593 SPECIAL TOPICS (VAR) The student will work under the supervision of a faculty member on subject material of mutual interest.

COE 311, 411 COOPERATIVE EDUCATION IN PHYSICAL SCIENCES (5-5) One quarter of full-time supervised work in an outside laboratory taking part in the University Co-op Program. Limited to students admitted to the Co-op Program. A written report and supervisor evaluations will be required of each student.



# CHEMISTRY

The student may choose a *Bachelor of Arts* program or a *Bachelor of Science* program of study in Chemistry.

DEGREE: *Bachelor of Arts*

This program is for students preparing for careers in medicine, dentistry, environmental studies, veterinary medicine, or secondary science education. Students interested in teacher certification see note on page 5.

LOWER DIVISION PREPARATION:

*Required Courses:* one year of general chemistry; algebra and trigonometry; one year of general biology.

*Lower or Upper Division Preparation:* required courses which may be taken at the University: MAS 301-302 Differential and Integral Calculus; CHE 301-302 Organic Chemistry I-II; PHY 301-302-303 Physics with Calculus *or* PHY 305-306 Physics without calculus.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **25** |
| CHE 403 Organic Chemistry III | 5 | |
| CHE 427 Organic Structure Determination | 2 | |
| *or* | | |
| CHE 428 Research Techniques in Organic Chemistry | 2 | |
| CHE 311 Physical Chemistry for Life Sciences | 7 | |
| CHE 312 Quantitative Analysis | 6 | |
| One additional chemistry course | 5 | |
| *Electives:* | | **65** |
| | | **90** |

**OR**

DEGREE: *Bachelor of Science*

This program is according to the guidelines of the American Chemical Society and prepares students for graduate study or professional careers as a chemist in industry, government service, or secondary school teaching.

LOWER DIVISION PREPARATION:

*Required Courses:* one year of general chemistry; algebra and trigonometry.

*Lower or Upper Division Preparation:* required courses which may be taken at the University: MAS 301-302 Differential and Integral Calculus; CHE 301-302 Organic Chemistry I-II; PHY 301-302-303 Physics with Calculus.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **55** |
| CHE 403 Organic Chemistry III | 5 | |
| CHE 427 Organic Structure Determination | 2 | |
| *or* | | |
| CHE 428 Research Techniques in Organic Chemistry | 2 | |
| CHE 321 Physical Chemistry I — Thermodynamics | 5 | |
| CHE 322 Physical Chemistry II — Equilibrium and Properties of Solutions | 5 | |
| CHE 323 Physical Chemistry III — Quantum Mechanics | 5 | |
| CHE 325-326-327 Physical Chemistry Laboratory I-II-III | 1-2-2 | |
| CHE 312 Quantitative Analysis | 6 | |
| CHE 412 Modern Analytical Chemistry | 7 | |
| CHE 431 Advanced Inorganic Chemistry | 5 | |
| Senior Seminar *and/or* Independent Study | 5 | |
| One additional senior-level chemistry course | 5 | |
| *Other Required Courses:* at least *one* of the following: | | |
| MAS 325 Differential Equations | 5 | |
| MAS 425 Math Methods in the Physical Sciences | 5 | |
| MAS 311 Introduction to Computers | 5 | |
| *Electives:* | | **30** |
| | | **90** |

*Remarks:* No *D* grades will be allowed in courses required for the major. This rule includes required courses outside the discipline.

*Minor in Chemistry:*

| | | |
|---|---|---|
| *Required Courses:* | | **34** |
| CHE 305-306 Contemporary Chemistry with Laboratory | 14 | |
| CHE 301-302 Organic Chemistry with Laboratory | 14 | |
| CHE 312 Quantitative Analysis with Laboratory | 6 | |
| | | **34** |

## COURSE OFFERINGS

CHE 301 ORGANIC CHEMISTRY (5) (F-S) An introduction to chemical bonding and atomic structure theory as it pertains to the chemistry of carbon compounds. Correlation between structure and reactivity of organic molecules followed by a systematic look at the various reaction types using reaction mechanisms as a tool for study. Prerequisite: general chemistry.

CHE 301L ORGANIC CHEMISTRY LABORATORY (2) (F-S) An introduction to the basic experimental techniques of the organic chemist. Corequisite: CHE 301.

CHE 302 ORGANIC CHEMISTRY II (5) (W-SS) Continuation of CHE 301.

CHE 302L ORGANIC CHEMISTRY LABORATORY II (2) (W-SS) Synthesis and qualitative analysis of organic compounds. Corequisite: CHE 302.

CHE 305-306 CONTEMPORARY CHEMISTRY I-II (5-5) (F-W,S-SS) Fundamental principles of modern chemistry: atomic structure, stoichiometry, chemical bonding, states of matter, thermodynamics, solutions, kinetics, equilibrium, electrochemistry. This course is primarily designed for the student who feels that his background in general chemistry is somewhat weak and who would like to go on to organic chemistry or more advanced biology courses. Familiarity with algebraic manipulations is required. Should be accompanied by CHE 305L-306L.

CHE 305L-306L CONTEMPORARY CHEMISTRY LABORATORY I-II (2-2) (F-W,S-SS) Laboratory to accompany CHE 305-306. Basic laboratory techniques are introduced and experiments performed on material relating to CHE 305-306.

CHE 309 SURVEY OF ORGANIC CHEMISTRY (5) (F) A basic one-quarter survey course in organic chemistry for non-majors presenting a broad background in the reactions and structures of organic molecules. Does not fulfill requirements for chemistry, biology, or pre-med majors. Should be accompanied by CHE 309L. Prerequisite: general chemistry.

CHE 309L SURVEY OF ORGANIC CHEMISTRY LABORATORY (2) (F) An introduction to the basic experimental techniques of organic chemistry. Corequisite: CHE 309.

CHE 311 PHYSICAL CHEMISTRY FOR THE LIFE SCIENCES (5) (S) Principles of physical chemistry with particular reference to the life sciences. Topics include thermodynamics, equilibria, electrochemistry, and reaction kinetics. Prerequisites: Differential and Integral Calculus and General Physics. A background in Quantitative Analysis is also helpful.

CHE 311L PHYSICAL CHEMISTRY FOR THE LIFE SCIENCES LABORATORY (2) (S) Projects in physical properties of solutions, equilibrium, reaction kinetics, and equations of state of interest to students in life sciences. Taken concurrently with CHE 311.

CHE 312 QUANTITATIVE ANALYSIS (4) (S) Fundamentals of classical quantitative analysis. Topics include theory of precipitation, acid-base, and oxidation-reduction reactions, as well as an introduction to spectrophotometric methods of analysis, ion-exchange techniques and complex formation titrations. Must be taken concurrently with CHE 312L. Prerequisite: CHE 305-306 or equivalent.

CHE 312L QUANTITATIVE ANALYSIS LABORATORY (2) (S) Laboratory to accompany CHE 312. Must be taken concurrently with CHE 312.

CHE 321/PHY 321 PHYSICAL CHEMISTRY I — THERMODYNAMICS (5) (F) Fundamental principles of thermodynamics; the first, second, and third laws, free energy, entropy, in addition to the chemical potential, phase rule and its applications, concepts of activation energy. The first in a three-quarter physical chemistry sequence. Prerequisites: general chemistry, general physics, and mathematics through Calculus II. Calculus II may be taken concurrently.

CHE 322 PHYSICAL CHEMISTRY II — EQUILIBRIUM, KINETICS AND PROPERTIES OF SOLUTIONS (5) (W) The second in the series of physical chemistry courses: equilibrium, the relationship of the equilibrium constant to the chemical potential, catalyzed reactions, colligative properties of solutions, osmotic pressure, dipole moments and conductivity. Prerequisite: CHE 321.

CHE 323/PHY 420 PHYSICAL CHEMISTRY III — QUANTUM MECHANICS (5) (S) The third in the physical chemistry series: simple quantum mechanical calculations, solutions to the Schroedinger wave equation, simple harmonic oscillator, particle in a square well, the hydrogen atom, structure of atomic and molecular orbitals. Prerequisites: general chemistry, general physics, and mathematics through Calculus II.

CHE 325L PHYSICAL CHEMISTRY LABORATORY I (1) (F) Equation of state and transport experiments taken concurrently with CHE 321.

CHE 326L PHYSICAL CHEMISTRY LABORATORY II (2) (W) Projects in thermochemistry, physical properties of solutions, and homogeneous equilibria. Taken concurrently with CHE 322.

CHE 327L PHYSICAL CHEMISTRY LABORATORY III (2) (S) Heterogeneous equilibria, reaction kinetics in solution; requires some knowledge of chemical reaction mechanisms in solution.

CHE 356L/PHY 356L INTRODUCTION TO ELECTRONIC INSTRUMENTATION (5) (W) The student learns to set up and operate such standard pieces of laboratory apparatus as bridges, amplifiers, oscilloscopes, frequency counters and thermocouple circuits utilizing chart recorders. A background in general physics is recommended.

CHE 403 ADVANCED ORGANIC CHEMISTRY (5) (F-S) A look into specialized areas of organic chemistry including such topics as molecular rearrangements, photochemistry, pericyclic reactions and heterocyclic chemistry, as well as more detailed examination of synthesis, etc. Should be accompanied by a laboratory (CHE 427 or CHE 428).

CHE 404 BIO-ORGANIC CHEMISTRY (5) (S) Chemistry of naturally occurring organic compounds of biological importance. The relationship between organic chemistry and the chemical reactions which constitute the living organism.

CHE 405 SPECTROSCOPY AND MOLECULAR STRUCTURE (5) (W) Molecular structure and its relationship to spectroscopy. Introduction to theory and practical use of uv/visible, infrared, nmr, and mass spectroscopy. Prerequisite: Competency in organic chemistry is required. Physical chemistry is recommended.

CHE 406/PHY 411 STATISTICAL THERMODYNAMICS (5) (F) Review of the fundamental laws of thermodynamics applied to simple systems. Elementary kinetic theory of gases applied to diffusion, viscosity, thermal and electrical conductivity. Boltzmann, Fermi-Dirac and Bose-Einstein distribution functions applied in the Boltzmann limit to the calculation of thermodynamic variables. Prerequisites: General chemistry, general physics and mathematics through Calculus II.

CHE 407 KINETICS AND CATALYSIS (5) (F) Theory of elementary reactions, activated complex theory, mechanisms of complex reactions. Competence in fundamental calculus, including differential equations is required.

CHE 412 MODERN ANALYTICAL CHEMISTRY (5) (S) A lecture-laboratory course designed to introduce instrumental methods of chemical analysis including spectrophotometry, potentiometry, gas chromatography, atomic absorption, and polarography. Specific instrumental techniques will be covered. Must be taken concurrently with CHE 412L. Prerequisites: Quantitative analysis, organic chemistry, and general physics.

CHE 412L MODERN ANALYTICAL CHEMISTRY LABORATORY (2) (S) Laboratory to accompany CHE 412. Must be taken concurrently with CHE 412.

CHE 421 ORGANIC SYNTHESIS (5) (F) Use of classical and modern reactions in the design and construction of complex organic molecules, including natural products. Some topics covered will be construction reactions, refunctionalization, stereochemistry and conformational analysis.

CHE 424 NATURAL PRODUCTS CHEMISTRY AND BIOSYNTHESIS (5) (F) Studies of the chemical origins (biosynthesis), properties, and synthesis of the various classes of naturally occurring compounds: terpenes, steroids, alkaloids, acetogenins.

CHE 426 PHYSICAL ORGANIC CHEMISTRY (5) (S) A series of topics will be discussed including molecular orbital theory as it pertains to organic molecules, kinetic and thermodynamic approaches to the study of reaction mechanisms, quantitative approaches to conformational analysis, etc.

CHE 427L ORGANIC STRUCTURE DETERMINATION (2) (F-S) The qualitative analysis of organic compounds using modern spectroscopic and chemical methods.

CHE 428L RESEARCH TECHNIQUES IN ORGANIC CHEMISTRY (2) (F-S) Practical instruction in the more advanced manipulations and procedures of the modern organic laboratory. This course is designed to prepare a student for research in organic chemistry and is a prerequisite for independent study (CHE 491) in organic chemistry.

CHE 431 ADVANCED INORGANIC CHEMISTRY (5) (F) Molecular structure of inorganic compounds, periodicity, introduction to nonaqueous solvents, ligand field theory, organometallic compounds.

CHE 432 PHYSICAL INORGANIC CHEMISTRY (5) (W) Continuation of CHE 431. Introduction to use of physical methods to determine structure of inorganic compounds.

CHE 436 RADIOCHEMISTRY AND NUCLEAR CHEMISTRY (5) (S) Production, isolation, methods of detection, counting statistics and estimation of radioisotopes. Applications to chemical, physical and biological problems. Prerequisites: CHE 305-306 or equivalent and CHE 312.

CHE 437L RADIOCHEMICAL TECHNIQUES LABORATORY (2) Experiments involving handling, detection, chemical separation and use of radioisotopes. Students must have concurrent enrollment in either CHE 436 or EVR 536.

CHE 440 SOLID STATE (5) (S) Crystalline form of solids, lattice dynamics, metals, insulators, semi-conductors, and dielectric materials. Prerequisites: General chemistry, general physics, and mathematics through Calculus II.

CHE 481 SPECIAL TOPICS IN ORGANIC CHEMISTRY (5) (F) An intensive examination of one or more areas selected by instructor and students.

CHE 483 SPECIAL TOPICS IN PHYSICAL CHEMISTRY (5) (W) An intensive examination of one or more areas selected by instructor and students.

CHE 485 SPECIAL TOPICS IN INORGANIC CHEMISTRY (5) (S) An intensive examination of one or more areas selected by instructor and students.

CHE 491-492-493 RESEARCH AND INDEPENDENT STUDY IN CHEMISTRY (VAR CREDIT) (F-W-S-SS) At any time the student chooses, from the beginning of his junior year on, he may work with a professor in a research area. The student should have a good grounding in general chemistry and preferably in organic chemistry and physics as well. He is encouraged to talk to a number of professors in the department and select that area with which he is most comfortable. It is anticipated that several actual publications will result. Variable credit with a maximum of 15 credits.

CHE 495 SENIOR SEMINAR (3) (W) During the senior year, the student will present a total of two topics, prepared from current journal articles in the field of chemistry, to other chemistry major students, environmental science students, chemistry and other science faculty.

CHE 581 SPECIAL TOPICS IN ORGANIC CHEMISTRY (5) (F) An intensive examination of one or more areas selected by instructor and students.

CHE 583 SPECIAL TOPICS IN PHYSICAL CHEMISTRY (5) (W) An intensive examination of one or more areas selected by instructor and students.

CHE 585 SPECIAL TOPICS IN INORGANIC CHEMISTRY (5) (S) An intensive examination of one or more areas selected by instructor and students.

COE 311, 411 COOPERATIVE EDUCATION IN PHYSICAL SCIENCES (5) One quarter of full-time supervised work in an outside laboratory taking part in the University Co-op Program. Limited to students admitted to the Co-op Program. A written report and supervisor evaluations will be required of each student.



## EARTH SCIENCES

This program is interdisciplinary in nature and provides the background the student will need in professional work or graduate study. While thoroughly preparing the student in the basic sciences, the program also provides a sound knowledge of Caribbean earth sciences. Student and faculty exchanges will be promoted with their counterparts in the Caribbean. The student may choose either a *Bachelor of Arts* program *or* a *Bachelor of Science* program in earth sciences.

DEGREE: *Bachelor of Arts*

This program is for the student who desires a career in science education. This program is for the student who desires a significant background in the earth sciences for a career in science education, or in a public or private agency dealing with problems in the framework of the earth sciences.

LOWER DIVISION PREPARATION:

*Required Courses:* general biology; physical geology or the equivalent; college algebra, trigonometry, and analytical geometry; general physics, general chemistry.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* | | 35 |
| EAS 309 Modern Astronomy | 5 | |
| EAS 410 Meteorology | 5 | |
| EAS 461 Paleobiology | 5 | |
| EAS 311 Physical Geography | 5 | |
| EAS 331 Physical Oceanography | 5 | |
| EAS 401 Applied Environmental Geology | | |
| *or* | | |
| WQT 330/EVR 421 Water Resources | 5 | |
| BSC 308 Biological Oceanography | 5 | |
| *Possible Natural Science Electives:* | | 10 |
| BSC 306 Fundamentals of Ecology | 5 | |
| EAS 481 Cartography and Geologic Surveying | 3 | |
| PHY 307 Observational Astronomy | 2 | |
| *Social Science Electives:* | | (45) |
| ANT 420 Cultures of the Caribbean | 5 | |
| ECO 409 Economics of the Caribbean | 5 | |
| ECO 510 Economic Problems of Emerging Nations | 5 | |
| POS 307 Government and Politics of the Caribbean | 5 | |
| POS 409 Topics in Caribbean Politics | 5 | |
| POS 429 Conflict and Cooperation in the Caribbean | 5 | |
| | | 90 |

**OR**

DEGREE: *Bachelor of Science*

This program provides a thorough scientific understanding of the basic sciences required for graduate study or a career in earth, marine, and atmospheric sciences.

LOWER DIVISION PREPARATION:

*Required Courses:* 4 semester hours of general biology; 4 semester hours of physical geology or the equivalent; 4 semester hours of historical geology; mathematics (calculus I and II); 15 quarter hours or the equivalent, including laboratory, of general physics; 14 quarter hours or the equivalent, including laboratory, of general chemistry.

*Remarks:* The mathematics, physics, and chemistry requirements may be taken at the University.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* a minimum of 55 quarter hours of earth science courses is required including at least 35 quarter hours from the following courses: | | 55 |
| EAS 309 Modern Astronomy | 5 | |
| EAS 311 Physical Geography | 5 | |
| EAS 313 Optical Mineralogy | 5 | |
| EAS 331 Physical Oceanography | 5 | |
| EAS 410 Meteorology | 5 | |
| EAS 412 Geophysics | 5 | |
| EAS 421 Structural Geology | 5 | |
| EAS 461 Paleobiology | 5 | |
| EAS 471 Sedimentology | 5 | |
| *Other Required Courses:* | | 8 |
| Independent Study | 5 | |
| EAS 481 Cartography and Geologic Surveying or the equivalent | 3 | |

*Electives:* select courses to meet particular professional goals. Suggestions: **27**

*Natural Sciences:*

| | |
|---|---|
| BSC 308 Biological Oceanography | 5 |
| BSC 360 Fundamentals of Ecology | 5 |
| BSC 560 Marine Ecology | 5 |
| WQT 330/EVR 421 Water Resources | 5 |
| EVR 441 Energy Resources | 5 |

*Social Sciences:*

| | |
|---|---|
| ANT 420 Cultures of the Caribbean | 5 |
| ECO 409 Economics of the Caribbean | 5 |
| ECO 510 Economic Problems of Emerging Nations | 5 |
| POS 307 Government and Politics of the Caribbean | 5 |
| POS 409 Topics in Caribbean Politics | 5 |
| POS 429 Conflict and Cooperation in the Caribbean | 5 |
| | **90** |

*Remarks:* No *D* grades will be allowed in the courses required for the major. This rule includes required courses outside the discipline.

*Minor in Earth Sciences*

*Required Courses:* 30 quarter hours minimum; the following courses are recommended:

| | |
|---|---|
| EAS 301 Environmental Geology | 5 |
| EAS 302 Elements of Caribbean Geology | 5 |
| EAS 309 Modern Astronomy | 5 |
| EAS 311 Physical Geography | 5 |
| EAS 331 Physical Oceanography | 5 |
| EAS 410 Meteorology | 5 |
| EAS 461 Paleobiology | 5 |
| EAS 481 Cartography and Geologic Surveying | 5 |

*Certificate in Caribbean Studies*

A student may earn a Certificate in Caribbean Studies by successfully completing the 30 quarter hours of social sciences coursework listed above for the *Bachelor of Science* Program in Earth Sciences, *or* by completing six other Caribbean related courses from at least two departments.

The social science major student in the Caribbean Certificate Program may elect up to five Caribbean related earth science courses toward the six courses required for the certificate.

*Recommended Courses:* in sequence:

| | |
|---|---|
| EAS 302 Elements of Caribbean Geology | 5 |
| EAS 495 Caribbean Earth Sciences Seminar | 5 |
| EAS 496 Caribbean Mineral Resources Field Trip | 5 |

## COURSE OFFERINGS

EAS 301 ENVIRONMENTAL GEOLOGY (5) An introductory course for non-majors and those desiring a cultural understanding of the earth sciences. An investigation of geological aspects affecting man and his environment. Emphasis is placed upon practical aspects of natural and man-induced geological processes affecting men's daily life. Case studies and general principles illustrated from South Florida and the Caribbean area. One or two field trips to be expected.

EAS 301L ENVIRONMENTAL GEOLOGY LABORATORY (1) Study of common rocks and minerals. Study of the various rocks found in South Florida and their environmental importance concerning the availability of fresh ground-water to the region. Study of contour and geologic maps. Optional for nonscience majors. Corequisite of EAS 301 for science majors.

EAS 302 ELEMENTS OF CARIBBEAN GEOLOGY (5) A survey of the geology of the Caribbean and neighboring regions in view of current data and modern concepts of global tectonics. The course summarizes the important points of Caribbean and Central American geology in their relation to mineral and energy resources, natural environmental disasters, especially seismic zones, agriculture and the geologic potentials for future development and industrialization.

EAS 309/PHY 309 MODERN ASTRONOMY (5) The structure and evolution of our solar system is studied with particular emphasis on physical concepts. Topics will include astronomical coordinate systems, celestial mechanics, the earth's motions and a description of our solar system. Prerequisites: College Algebra and Geometry.

EAS 310/PHY 310 MODERN ASTROPHYSICS (5) An introduction to the structure of stars and galaxies and the evolution of the universe as a whole. Topics will include atomic spectra, stellar classifications, galactic structure and cosmology. Prerequisites: PHY 301-303, Calculus I and II and PHY 309.

EAS 311 PHYSICAL GEOGRAPHY (5) Survey of the physical environment relevant to studies in regional geography, and earth sciences. Natural evolution of landforms and the interacting processes responsible for these features. Environmental modifications and deteriorations caused by human interactions, their socio-economic impacts and geographic problems. Case studies illustrated from South Florida and the Caribbean region.

EAS 311L PHYSICAL GEOGRAPHY LAB (1) The use of maps as means of depicting the earth's morphology, the processes responsible for the landforms and to infer the subsurface structure of the earth's crust. Photogrammetry and use of aerial photographs in land evaluation, mapping, and as map supplements. Optional for nonscience majors. Corequisite of EAS 311 for science majors.

EAS 312 MINERALOGY (5) Physical properties and origin of the most common minerals and the techniques of mineral identification and study, including principles of symmetry, internal structure of crystals, bonding and external form. A considerable part of the time is devoted to laboratory study of minerals. Prerequisites: Physical Geology, and general chemistry.

EAS 313 OPTICAL MINERALOGY (5) Analytical method for the study of optical properties of minerals, including the polarizing petrographic microscope, powder and single crystal x-ray diffraction methods, and x-ray fluorescence. Prerequisite: Mineralogy or equivalent. Given in sequence with EAS 312.

EAS 314 INTRODUCTION TO PETROLOGY AND PETROGRAPHY (5) Classification, macroscopic and microscopic description, and genesis of igneous, sedimentary and metamorphic rocks. Physical chemistry of geologic processes involved in the formation of the major rock types of the three groups. A considerable part of the time is devoted to the study of rocks in thin sections.

EAS 331 PHYSICAL OCEANOGRAPHY (5) A survey of the ocean as a physico-chemical environment. Properties of sea water, and the influence of sea-air interactions on the ocean structure. Water masses and oceanic circulation patterns. Diffusion and advection and their relation to oceanic properties. Heat budget and climatic control. Impact of oceanic properties on man's environment and economy. Case study of a mediterranean sea illustrated from the Caribbean Sea. One field trip to be expected.

EAS 340 MINERAL DEPOSITS (5) Morphology and genetic processes involved in known occurrences of mineral deposits; structural factors governing their size, location and shape. Exploration, detection, and exploitation methods. Emphasis is placed on known and potential mineral deposits of the Caribbean and neighboring areas. Prerequisites: Physical Geology or equivalent, EAS 331, EAS 313, and chemistry.

EAS 340L MINERAL DEPOSITS LABORATORY (1) Microscopic petrology and petrography of ore samples and interpretation of geologic maps bearing on mineral deposits. Special emphasis is put on the Caribbean region. Corequisite of EAS 340.

EAS 401 APPLIED ENVIRONMENTAL GEOLOGY (5) A survey of the geological and geographical factors critical to man's attempt to contend with natural processes. Construction problems, sewers, waste disposal, dams, ground water, terrain evaluation in relation to the nature of the underlying substratum. Principles illustrated from South Florida and the Caribbean region in particular. Study of the geologic factors involved in future development and growth of these areas and conservation methods in relation to the geology of these areas. Prerequisites: EAS 301, EAS 311, and a sound background in mathematics, physics, and chemistry.

EAS 401L APPLIED ENVIRONMENTAL GEOLOGY LABORATORY (1) Analysis of physical and physico-chemical geologic processes. Identification, control and correction techniques of landslides, rockfall, subsidence, quicksand, piping and flooding hazards. Corequisite of EAS 401.

EAS 410/EVR 412 METEOROLOGY (5) The earth's atmosphere and its physical properties. General circulation and thermal structure of the atmosphere on a global and local scale. Physics and dynamics of clouds. Weather analysis and forecasting including temperate and tropical areas with emphasis on the Caribbean and neighbouring areas, birth place of major Atlantic tropical storms. Reading of weather maps, introduction to meteorologic instruments, transmission and plotting of meteorological data. Recommended: EAS 309, EAS 311, and competence in physics and calculus.

EAS 412 GEOPHYSICS (5) A survey of the different principles and methods of measurements of the physical properties of the earth and the moon: seismic, magnetic, electrical, thermal and gravitational. The implications of the results in terms of the earth's structure, composition, evolution and present state. Case studies illustrated from recent geophysical data from the Caribbean area and Central America. Prerequisites: EAS 301 and EAS 331.

EAS 421 PRINCIPLES OF STRUCTURAL GEOLOGY (5) Survey of basic principles and methods in the study and analysis of geologic deformation illustrated from the Caribbean and Central American area. Recognition and interpretation of geologic structures in island areas. Mechanics of deformable bodies, fractures, faulting, brittle-ductile transition in rocks, flow and folding. Prerequisites: Physical Geology or equivalent, EAS 311. Recommended: EAS 412 and EAS 302.

EAS 421L PRINCIPLES OF STRUCTURAL GEOLOGY LABORATORY (1) Interpretation of geologic structures from hand specimens, on geologic and topographic maps, and from aerial photos. Corequisite of EAS 421.

EAS 430 DYNAMIC GEOGRAPHY (5) Theories and techniques used in modern geographic analyses. Simple correlation and regression. Multiple regression. Surfaces and regions, and the analysis of variance. Non parametric statistics. Factorial analysis and spatial allocation models. Examples emphasize aspects of economic, urban, transportation and social geography in South Florida and the Caribbean area. Prerequisites: EAS 311 and a sound background in mathematics.

EAS 432 MARINE GEOLOGY (5) Survey of the main physiographic provinces of the ocean floor. Modern theories concerning the evolution of the crust; continental drift, sea-floor spreading. Distribution and thickness of deep-sea sediments and their relationship to the morphology and evolution of the crust. Deep-sea mineral resources. Marine geology of the Caribbean from recent data. Sea-bed assessment of mineral resources in the Caribbean and neighbouring region. Prerequisites: EAS 331, EAS 471, or instructor's permission.

EAS 432L MARINE GEOLOGY LABORATORY (1) Training in the analysis and interpretation of marine geophysical data. Corequisite of EAS 432.

EAS 440 GEOCHEMISTRY (5) Origin of the chemical elements of common rock-forming minerals. Atomic theory, bond theory, lattice types, the interaction of electromagnetic waves and solids. Crystal chemistry of common oxides, sulfides, and rock-forming minerals. Geochemical cycles presently operating in the earth's atmosphere, hydrosphere, and lithosphere. Case studies in the Caribbean. Prerequisites: Chemistry, physics and mathematics, and a sound background in the earth sciences.

EAS 452 DYNAMIC METEOROLOGY (5) Dynamical processes in the atmosphere. Meteorological thermodynamics and atmospheric statics. Scientific bases for modern quantitative and analytical meteorology. Variation of the wind and pressure fields in the vertical. Mechanism of pressure change; behavior of cyclones and anticyclones. Dynamic forecasting by numerical methods. Prerequisites: EAS 309, EAS 311, and EAS 410.

EAS 461 PALEOBIOLOGY (5) Development of life as traced through the fossil record. Survey of the main groups of animals commonly found as fossils. Theories of evolution and extinction. Study of the major microfossil groups used in biostratigraphic zonation, and as paleoecologic indicators. Prerequisites: Physical and Historical Geology, General Biology, or the instructor's permission.

EAS 461L PALEOBIOLOGY LABORATORY (1) Microscopic study of foraminifera, radiolaria and the diatoms. Study of invertebrate fossils, and osteology of the vertebrates. Corequisite of EAS 461.

EAS 471 SEDIMENTOLOGY (5) Sedimentary processes in the geological cycles as illustrated in recent environments. Different groups of sedimentary rocks. Primary and secondary structures. Physicochemical properties and diagenetic processes. Analytical techniques applied to modern sedimentology of both loose and lithified sediments. Prerequisites: Physical geology or equivalent, EAS 313, and a sound background in mathematics and chemistry.

EAS 471L SEDIMENTOLOGY LABORATORY (1) Mechanical analyses, coloration techniques, and heavy mineral separation techniques. Macroscopic and microscopic study of sediments and rocks.

EAS 481 CARTOGRAPHY AND GEOLOGIC SURVEYING (3) A three-week course to be offered in the United States or in one of the Caribbean islands. The course is designed for Earth Science majors. Methods in cartographic drafting, compilation, design and evaluation. Methods of geologic surveying. Use of plane table, topographic maps and air photographs. Students unable to attend this course at FIU are encouraged to take a similar field course given at other institutions as a substitute. Prerequisites: EAS 311 and EAS 421.

EAS 491-492 INDEPENDENT STUDY (5-5) Individual research under the supervision of a professor in the student's field of specialization or interest. Subject may deal with laboratory work, field and/or bibliographical work. Field research in the Caribbean is encouraged. Variable credit with a maximum of 10 credits. Prerequisite: Permission of the student's advisor.

EAS 495 CARIBBEAN EARTH SCIENCES SEMINAR (5) Discussion of various topics dealing with geographic and geologic problems involving local, national, and international influence on economic life. Similar discussion will be held on oceanographic problems related to both the aquatic and sea-bed resources. Guest speakers in the Earth and Social Sciences will present lectures pertinent to their respective fields. Prerequisite: EAS 302 or instructor's permission.

EAS 496 CARIBBEAN MINERAL RESOURCES FIELD TRIP (5) A three-week field course in at least two Caribbean islands. Cursory review of the geologic factors governing the occurrence, size, and economic value of mineral deposits. Emphasis is on bauxite, copper, and energy resources. Visit to selected regions of active exploitation and processing plants, as well as abandoned mines, and potential sites of future exploitations. Prerequisite: EAS 302, or instructor's permission.

EAS 501 CARIBBEAN SHALLOW-MARINE ENVIRONMENTS (5) Four-week field study of multiple tropical environments as illustrated in the Caribbean. Physico-chemical processes in the near-shore arenaceous, argillaceous and calcareous environments. Coral reef morphology, ecology and distribution patterns. Dynamical processes acting on the nearshore environments and their effects on reef growth and distribution. Reef bioerosions. Coastal evolution in response to natural processes. In-site study of some similar emerged environments in the Caribbean islands. Economic importance of tropical shallow-marine environments in world's fuel resources. Course includes extensive field work both on land and underwater, and an individual field research project. Qualifications: Open to advanced undergraduate and graduate students in the Earth and Biological sciences or cognate fields.

EAS 561 CARIBBEAN STRATIGRAPHIC MICROPALEONTOLOGY (5) Survey of the stratigraphy of biostratigraphic type-sections described in the Caribbean area. Deep-sea stratigraphy from both piston-cores and deep-sea drilling samples. Emphasis is placed on planktonic foraminifera and radiolaria species used as index-species in the equatorial-tropical biozonation typified in Cretaceous and Cenozoic Caribbean sediments. Paleobiogeographic and paleoecologic considerations. Considerable amount of time will be devoted to the study and identification of specimens under the microscope. Prerequisite: GEO 461 or the instructor's permission.

COE 311, 411 COOPERATIVE EDUCATION IN PHYSICAL SCIENCES (5) One quarter of full-time supervised work in an outside laboratory taking part in the University Co-op Program. Limited to students admitted to the Co-op Program. A written report and supervisor evaluations will be required of each student.



## ENVIRONMENTAL STUDIES

This program prepares environmentalists in such fields as political science, economics, sociology, and the humanities and scientists with environmental awareness, who desire to work in areas dealing with the natural environment. The student may choose either a *Bachelor of Arts* (non-science) program or a *Bachelor of Science* (science) program of study in environmental studies.

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

*Recommended Courses:* natural history of South Florida, conservation of natural resources, man and environment, college algebra (for economics and political science concentration only).

*Remarks:* recommended courses which may be taken at the University: POS 321 The Legislative Process or POS 314 Politics in Public Bureaucracy; ECO 301 Economics, Man, and Society.

*Note:* A student with an *Associate of Arts* degree is adequately prepared to enter the program. A student with an *Associate of Science* degree may wish to enroll in the programs of the School of Technology, but may also be prepared to enter the Environmental Studies Program. An advisor should be consulted.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **43** |
| EVR 301-302-303 Environmental Science | 15 | |
| BSC 360 Fundamentals of Ecology | 5 | |
| ECO 319 Introduction to Environmental Economics | 5 | |
| MAS 310 Computers and Society *or* MAS 398 Mathematical Ecology | 5 | |
| POS 439 Environmental Politics and Policy | 5 | |
| EVR 491 Independent Study | 5 | |
| EVR 515 Environmental Field Studies of So. Florida | 3 | |
| *Additional Courses:* the student may elect *one* of the following areas of concentration: | | **47** |
| *1. General Environmental Studies:* select four courses from the following: | | |
| EVR 421 Water Resources | 5 | |
| EVR 431 Air Resources | 5 | |
| EVR 441 Energy Resources | 5 | |
| EAS 301 Environmental Geology | 5 | |
| EAS 401 Applied Environmental Geology | 5 | |
| EAS 340 Mineral Resources | 5 | |
| POS 552 Environmental Planning and Law | 5 | |
| ECO 421 Land and Resource Economics | 5 | |
| SOC 351 Population Analysis | 5 | |
| PHR 426 Man and Nature | 5 | |
| PSY 410 Environmental Psychology | 5 | |
| INR 445 World Resources and World Order | 5 | |
| *2. Economics — Political Science:* | | |
| ECO 307 Theory of Price | 5 | |
| ECO 421 Land and Resource Economics | 5 | |
| POS 421 Government and Politics of the U.S. | 5 | |
| POS 552 Environmental Planning and Law | 5 | |
| | | **90** |

*Remarks:* in special cases, equivalent courses may be substituted with the consent of a faculty advisor.

No *D* grades will be allowed in the courses required for the major. This rule includes required courses outside the discipline.

DEGREE: *Bachelor of Science*

*LOWER DIVISION PREPARATION:*

*Recommended Courses:* college algebra, conservation of natural resources, general biology, general chemistry, man and environment, natural history of South Florida, physical geology.

*Remarks:* recommended courses which may be taken at the University: MAS 301-302 Calculus (except for environmental biology); ECO 301 Economics, Man, and Society; PHY 301-303 or PHY 305-307 Physics; POS 301 or 321 The Legislative Process.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **40** |
| BSC 360 General Ecology | 5 | |
| ECO 319 Introduction to Environmental Economics | 5 | |
| EVR 401-402 Survey of Environmental Problems | 10 | |
| MAS 311 Introduction to Computers *or* MAS 398 Mathematical Ecology | 5 | |
| POS 439 Environmental Politics and Policy | 5 | |
| EVR 491 Independent Study | 5 | |
| At least one course from the electives listed under the particular concentration | 5 | |
| *Additional Courses:* the student may then select *one* of the following areas of concentration: | | **50** |
| 1. AIR QUALITY: | | |
| *Required:* | | |
| CHE 312 Quantitative Analysis | 5 | |
| CHE 301-302 Organic Chemistry | 14 | |
| EVR 431 Air Resources | 5 | |
| EVR 410/EVR 412 Meteorology | 5 | |
| *Electives:* | | |
| CHE 356 Instrumentation | 5 | |
| CHE 412 Modern Analytical Chemistry | 5 | |
| CHE 311 Physical Chemistry for Life Sciences | 5 | |
| EVR 441 Energy Resources | 5 | |
| CHE 321 Thermodynamics | 5 | |
| 2. WATER QUALITY: | | |
| *Required:* | | |
| CHE 312 Quantitative Analysis | 5 | |
| CHE 311 Physical Chemistry for Life Sciences | 5 | |
| EVR 421 Water Resources | 5 | |
| Two courses in Aquatic Biology | 10 | |
| EAS 440 Geochemistry | 5 | |
| *Electives:* | | |
| CHE 356 Instrumental Analysis | 5 | |
| CHE 412 Modern Analytical Chemistry | 7 | |
| EAS 471 Sedimentology | 5 | |
| PHY 430 Fluid Mechanics | 5 | |
| 3. ENERGY AND RESOURCES: | | |
| *Required:* | | |
| PHY 301-303 Physics with Calculus (if not completed in the lower division) | 15 | |
| CHE 321 Thermodynamics *or* CHE 311 Physical Chemistry for Life Sciences | 5 | |
| PHY 351 Earth Physics | 5 | |
| EVR 441 Energy Resources | 5 | |
| EAS 340 Mineral Resources | 5 | |
| *Electives:* | | |
| EVR 431 Air Resources | 5 | |
| EAS 312 Mineralogy | 5 | |
| EVR 421 Water Resources | 5 | |
| EAS 440 Geochemistry | 5 | |
| CHE 436 Nuclear Chemistry | 5 | |

4. MARINE ECOLOGY:

*Required:*

| | |
|---|---|
| EVR 421 Water Resources | 5 |
| EAS 331 Oceanography | 5 |
| BSC 308 Biological Oceanography | 5 |
| BSC 310 General Microbiology | 5 |

*Electives:*

| | |
|---|---|
| BSC 320 Tropical Botany | 5 |
| BSC 331 The Invertebrates | 5 |
| CHE 312 Quantitative Analysis | 5 |
| BSC 560 Marine Ecology | 5 |

5. GENERAL ENVIRONMENTAL SCIENCE:

*Required:*

| | |
|---|---|
| EVR 421 Water Resources | 5 |
| EVR 431 Air Resources | 5 |
| EVR 441 Energy Resources | 5 |
| CHE 312 Quantitative Analysis | 5 |

*Electives:* select from any of the courses in the other concentrations above.

**90**

*Remarks:* No *D* grades will be allowed in the courses required for the major. This rule includes required courses outside the discipline.

*Minor in Environmental Studies*

The minor in Environmental Studies consists of the following 25 credit program:

| | |
|---|---|
| EVR 301-302-303 Introduction to Environmental Science | 15 |
| *Note:* These courses need not be taken in sequence. No science background is required. | |
| ECO 319 Introduction to Environmental Economics | 5 |
| POS 439 Environmental Politics and Policy | 5 |

## COURSE OFFERINGS

EVR 301 ENVIRONMENTAL SCIENCE I (5) A course for non-science majors offering an introduction to the fundamental principles and concepts of ecology and to air pollution and water resources. No prerequisites.

EVR 302 ENVIRONMENTAL SCIENCE II (5) A course for non-science majors offering an introduction to energy resources and conservation, agricultural pollution, noise pollution and solid waste problems.

EVR 303 ENVIRONMENTAL SCIENCE III (5) A course for non-science majors offering an introduction to the ecology of South Florida through lectures and a series of field trips into several unique ecosystems, such as the Everglades, hardwood hammocks, and coastal regions. The course also deals with natural resource conservation, wildlife management and ecology, and population dynamics.

EVR 312 TOPICS IN ENVIRONMENTAL STUDIES (5) An intensive analysis of several current environmental topics. Recommended for primary and secondary school teachers.

EVR 401 SURVEY OF ENVIRONMENTAL PROBLEMS I (5) (W) An in-depth study of four or five environmental problems of current interest and continuing significance. The course requires competency at the college introductory level in at least three of the following: biology, chemistry, geology, physics.

EVR 402 SURVEY OF ENVIRONMENTAL PROBLEMS II (5) (S) A continuation of EVR 401.

EVR 412/EAS 410 METEOROLOGY (5) The earth's atmosphere and its physical properties. General circulation and thermal structure of the atmosphere on a global and local scale. Physics and dynamics of clouds. Weather analysis and forecasting including temperate and tropical areas with emphasis on the Caribbean and neighboring areas. Reading of weather maps. Introduction to meteorological instruments, transmission and plotting of meteorological data. Competence in physics and calculus is required.

EVR 421 WATER RESOURCES (5) A seminar dealing with various aspects of water use, water pollution problems, chemistry and ecology of South Florida's waters. General biology is a prerequisite. General chemistry and general ecology are recommended.

EVR 431 AIR RESOURCES (5) Common air pollutants and their sources and methods of control. Different legislative and administrative approaches will be studied. Prerequisite: General Chemistry.

EVR 441 ENERGY RESOURCES (5) Seminar dealing with power and energy production in modern society, fundamental energy relationships of industrial and domestic processes.

EVR 491-492 RESEARCH AND INDEPENDENT STUDY (VAR) The student works with a professor on a research project.

EVR 511 AIR POLLUTION DYNAMICS (5) A course designed to give an understanding of the fates of atmospheric pollutants. Scavenging processes in the atmosphere. Radiation. Residence times. Chemical reactions. Global transport process. Point source dispersion and modelling calculations. Prerequisites: AQT 351 or EVR 431.

EVR 512 TOPICS IN ENVIRONMENTAL STUDIES (5) An analysis of several current environmental topics. Recommended for primary and secondary school teachers.

EVR 515 SOUTH FLORIDA ECOLOGY: FIELD STUDIES (3) (W,S) An introduction to the ecology of South Florida through a series of field trips into several unique ecosystems, such as the Everglades, hardwood hammocks, and coastal regions. No science background required.

EVR 536 ENVIRONMENTAL NUCLEAR CHEMISTRY (5) Nuclear reactions and the nature of radioactivity. Properties and uses of radioactive isotopes, fission, and fusion. Introduction to reactor technology. Consent of instructor required.

EVR 581 SPECIAL TOPICS (5) (W) A graduate-level course dealing with selected environmental topics. The content will not necessarily be the same each time the course is offered

EVR 591 RESEARCH AND INDEPENDENT STUDY (VAR) The student works with a professor on a research project. Variable credit.

COE 311, 411 COOPERATIVE EDUCATION IN PHYSICAL SCIENCES (5, 5) One quarter of full-time supervised work in an outside laboratory taking part in the University Co-op Program. Limited to students admitted to the Co-op Program. A written report and supervisor evaluations will be required of each student.



## POLITICAL SCIENCE MAJOR

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

*Recommended Courses:* American government, ecology, economics, foreign language, history, international relations, introduction to statistics, psychology, sociology, anthropology, state and local government.

UPPER DIVISION PROGRAM:

*Major:*

| | *Quarter Hours* |
|---|---|
| *Breadth Requirements:* One 5 credit course in each of the following *fields:* Comparative politics (CP); international politics (IP); political theory (PT); public law (PL); public policy and administration (PP) | **25** |
| *Depth Requirements:* Five courses from any *one* of the following *areas:* international and comparative politics; political theory and analysis; public policy, law, and administration | **25** |
| *Remarks:* One course designated AP (Politics and the Arts) may be substituted for one course in the *depth* requirement | |
| *Electives:* | **40** |
| | **90** |

*Minor in Political Science*

*Prescribed Courses:*

1. No required courses
2. A minimum of 25 credits in Political Science
3. A maximum of 5 credits each in Political Science Internships and Independent Studies may apply to the 25-credit requirement.

PRE-LAW STUDENTS — The Department of Political Science recognizes the interests and needs of the political science major who plans to attend law school. The basic skills important to a pre-law student include: (1) how to think logically, (2) how to read intelligently, and (3) how to express oneself clearly. These skills are developed in any discipline or field. Beyond these basic skills, the department encourages the student to acquire a broad background in political science rather than to select only courses which deal with public law. Thus the requirements for the major allow the pre-law student to develop a wide comprehension of five major areas within political science and then to achieve greater depth of understanding on one

broad area. For most pre-law students, that area may be public law, policy, and administration. The department will counsel a student on pre-law school concerns and preparation as an integral part of its overall advising program. In addition, special opportunities will be available to a student who is interested in participating in judicial internships.

Public-Affairs Internship — The department provides the student at several different levels with opportunities for work-study experiences in governmental and non-governmental agencies. There are five categories of internships available to students: (1) judicial internships, (2) administrative internships, (3) legislative internships, (4) urban internships and (5) international internships. Standards for enrollment as an intern student include:

1. Enrollment is by permission of instructor only. A student wishing to enroll as a public affairs intern should consult with the appropriate faculty member and receive written permission to enroll. Ordinarily, specified courses must be taken prior to or concurrent with the internship.
2. A Political Science major may count a maximum of 10 credit hours in internships toward his major. Five additional hours may be counted as electives for a maximum of 15 credit hours in internship in Political Science.
3. All public affairs internships in Political Science will be on a "Credit — No Credit" basis. For further information, contact the Department of Political Science.

Evaluation of Student Records and Transcripts — As a general rule, students will receive transfer credits for junior and senior level courses in political science with a grade of C or better. These courses may then be applied to the 50 credit hour requirement for majors in political science.

Senior Honors Program — For a select number of exceptional seniors. This program will approximate some of the advantages of the seminar and tutorial system in the context of a large urban university.

## COURSE OFFERINGS

POS 301 FOUNDATIONS OF POLITICAL SCIENCE (5) Introduces the student to the major fields of political science. Attention is given to the concepts, definitions, and terminology used in the discipline. Intended for the non-major. Elective credit only for political science majors.

POS 302 METHODS OF POLITICAL ANALYSIS (5) Introduction to methods of collecting, analyzing and evaluating information to answer questions about politics. Includes formulation of research problems, ways to collect and summarize information, measures of relationship and of risk, and interpretation of research findings. Strongly recommended for students planning graduate study. (PT)

POS 303 THEORY AND ANALYSIS OF PUBLIC POLICY (5) An intensive examination of the theory and practice of formulating, legitimizing, administering, and evaluating public policy. Includes a discussion of the role of administrators, legislators, courts, interest groups and political parties in these processes. Gives the student an analytical basis for understanding and participating in the making of public policy in a variety of policy areas. (PP)

POS 304 GOVERNMENT AND POLITICS OF SOUTH AMERICA (5) A cross-national discussion of the political systems and cultures of the Latin American nations, with special emphasis on the larger countries. Attention is given to the role of the military and to the problem of violence in the area. Designed to give the student an overview of the political life of the nations with whom we share this hemisphere. (CP)

POS 306 DYNAMICS OF INTERNATIONAL POLITICS (5) An examination of the nation-state system. Attention is given to the use of force in international affairs, as well as those organizations, such as the United Nations, which have an international dimension. The course should aid the student in understanding the complexities of world politics. (IP)

POS 307 GOVERNMENT AND POLITICS OF THE CARIBBEAN (5) Studies the political system of the major British, French, Dutch, and Spanish areas in the Caribbean basin. Although attention is focused on such factors as political party systems, forms of government, and regional politics, emphasis is placed on the developmental problems confronted by small democracies in a nonindustrial setting. Discusses the paradoxes between modernity and tradition throughout the developing Caribbean and the relationship between politics, economics, and culture. Helps the student to understand the dynamics of change in an important area of the world and to compare those dynamics with change in his own country. (CP)

POS 308 GOVERNMENT AND POLITICS OF FAR EAST (5) An intensive examination of the major political institutions of China, Japan, and Korea. A critical analysis of changing aspects of traditional relationships in Far Eastern political culture and major reform movements in contemporary Far Eastern politics. Allows the student to better understand nations whose political development will be an important factor in global development. (CP)

POS 311 ANCIENT AND MEDIEVAL POLITICAL THEORY (5) A study of the major political philosophers of the Ancient and Medieval periods. Primary emphasis will be given to the Greek experience. The nature of political theory as a tradition of discourse will be examined. (PT)

POS 312 STATE - LOCAL POLITICAL PROCESSES (5) A study of the political processes, structure, and development of state and local political systems. This course attempts to provide students with an understanding of the basic structure of government and its relationship to local politics. (PP)

POS 313 GOVERNMENT AND POLITICS OF THE SOVIET UNION AND EASTERN EUROPE (5) An intensive examination of the political structures and institutions of the Soviet Union and East European Communist states. Particular attention will be paid to the historical and cultural underpinnings of the Soviet regime. The role of Marxist-Leninist ideology in shaping policy processes and content will be given careful analysis. (CP)

POS 314 POLITICS OF PUBLIC BUREAUCRACY (5) An introduction to the political environment of administrative decision-making in public agencies. Special emphasis is placed upon the politics of budgeting, personnel management, organizational requirements, and policy making. (PP)

POS 316 GOVERNMENT AND POLITICS OF CENTRAL AMERICA (5) Examines the political systems of the countries of Central America. Special attention is given to the problem of political restraints on the modernization process and to those regional arrangements which have been created to solve the area's problems. The student should develop a better understanding of a region which has close ties to the United States. (CP)

POS 317 THEORY AND METHODOLOGY OF INTERNATIONAL POLITICS (5) An intensive examination of the varied approaches to the consideration of international relations. Gives the student an analytical basis for the understanding of relations among states. (IP, PT)

POS 321 THE LEGISLATIVE PROCESS (5) Examines the context and process of legislative decision-making, including the impact of elections, groups, bureaucracies and the norms of legislative behavior on legislative decisions. Evaluates legislatures in light of various theories of representation and conflict-management. (PP, PL)

POS 322 MODERN POLITICAL THEORY I (5) An analysis of the political thought of the great political thinkers since Machiavelli, culminating with the Nineteenth Century theorists. Basic themes and ideas common to all these political theorists will be discussed in detail. The problem of "modernity" will receive special attention. (PT)

POS 323 URBAN POLITICS (5) An examination of the processes by which social conflicts in American urban areas are represented and regulated. Emphasis is placed on how urban problems are identified and proposed solutions are formulated, legitimized, and administered by urban policy-making processes. Includes a discussion of urban political culture. Enables the student to understand the major problems confronting communities in urban areas. (PP)

POS 326 THEORIES OF LATIN AMERICAN POLITICS (5) Studies the dynamics of Latin American politics with an emphasis on the role of the military and the church. Also considers alternative strategies for modernizing the region. (IP, PT)

POS 331 THE JUDICIAL PROCESS (5) An introduction to the study of public law. Examines the relationship between politics and judicial structure and process. Emphasizes the judicial system as a particular kind of policy-making system and evaluates its strengths and weaknesses from a policy-making perspective. (PL, PP)

POS 333 CONTEMPORARY POLITICAL THEORY (5) An overview of the major conceptual frameworks used by political theorists to describe, to explain, and to evaluate political behavior and processes. Stress is placed upon political theory not only as a basis for inquiry but also as a base for political action. Will enable the student to develop analytical abilities with which he can interpret the political events of his time. (PT)

POS 338 RACE AND POLITICS IN THE CARIBBEAN (5) A discussion of the entry of different ethnic and cultural groups in the Caribbean area and an examination of their impact, by the application of specific concepts, upon the political processes and political development in certain states. (CP)

POS 339 INTERNATIONAL LAW (5) The law of nations, including the laws of war. Includes a discussion of the development of legal norms applicable to the international arena from both Western and non-Western perspectives. Examines the emerging body of transnational law in social, economic, and technological areas of international relations. Enables the student to appreciate the problems involved in structuring conflict in international relations. (IP,PL)

POS 341 POLITICAL PARTIES (5) Studies the internal structure, political functions, and behavior of modern political parties. Attention is given to the relationships between political parties and various economic, military, ethnic, and regional interests. Enables the student to understand the problems of expressing and structuring political demands to facilitate or obstruct governmental decision making. (PP)

POS 343 CONSTITUTIONAL LAW: POWERS (5) An examination of the basic principles of American government as defined through constitutional law. Focus will be upon the nature of the union, federalism, national government powers, separation of powers, state government powers, and the powers of the respective branches of government. (PL)

POS 344 CONSTITUTIONAL LAW: LIMITATIONS (5) An examination of the limitations upon government as defined by the Supreme Court through constitutional law. Focus will be on the limitations of government with respect to the rights of the individual, of groups, and of the states. Particular attention will be paid to civil rights, civil liberties, the rights of the accused, political rights, and economic liberties. (PL)

POS 345 URBAN GOVERNMENT AND ADMINISTRATION (5) A study of the organization, administrative decision-making, and process of urban government; interaction with the political process. This course attempts to provide students with an understanding of the basic structure of urban government and administrative decision-making processes. The interaction of bureaucracy with political parties, interest groups, and voluntary citizen association groups will be examined. (PP)

POS 348 INTERNATIONAL ORGANIZATION (5) An analysis of the factors and problems involved in administering change on a transnational basis. Stress is placed on the difficulty of applying legal norms to the international arena. Attention is given to those organizations, especially the United Nations, which are entrusted with implementing international agreements. Enables the student to understand the difficulties involved in maintaining world peace. (IP)

POS 401 POLITICAL COMMUNICATION AND PUBLIC OPINION (5) The way in which political beliefs, attitudes, and roles are learned from childhood through life. Discusses the impact of widely held feelings on the policy-making process and the relationship of such concepts as "image" on public opinion. Aids the student in understanding his own political beliefs. (PP)

POS 403 CUBAN POLITICS (5) Examines the course of Twentieth Century Cuban politics. It is subdivided into five parts, involving the three periods of relatively stable politics and the two major revolutions which took place. (CP)

POS 404 POLITICS OF THE THIRD WORLD (5) A consideration of the problems and factors which both retard and generate political life in developing countries. Includes a discussion of the role of ideology in these nations. Enables the student to appreciate the difficulties of applying Western political norms and values to non-Western cultures. (CP)

POS 405 GOVERNMENT AND POLITICS OF WESTERN EUROPE (5) Studies the political systems of the major European countries on a comparative basis. Attention is focused on such factors as political party systems, the cabinet form of government, and the politics of the Common Market. Considers the implications of the impact of mass society on these nations. Enables the student to better understand the nations which have supplied many of the theoretical foundations of modern politics. (CP)

POS 407 INDEPENDENT STUDY (VAR) By arrangement with the instructor.

POS 408 ALTERNATIVE POLITICAL FUTURES (5) Explores the political dimensions of the future. Examines alternative political systems and institutions from the perspective of political ideas. Special attention will be given to assessing and extrapolating current political trends into the future (PP,PT)

POS 409 TOPICS IN CARIBBEAN POLITICS (5) An intensive examination of selected topics dealing with the Caribbean area. The subjects will vary, depending upon the desires of both students and faculty. (CP)

POS 411 THE PRESIDENCY (5) An examination of the various interpretations of the Presidency. Attention is directed to the role of the President in a technocratic society. Enables the student to understand one of the most visible political institutions. (PP)

POS 413 AMERICAN FOREIGN POLICY (5) An examination of the legal, administrative, and political structure by which American foreign policies are formulated and implemented. Includes a discussion of the objectives and consequences of United States foreign policy in selected regional, social-economic, and ideological areas. Enables the student to understand the procedures by which foreign policy is made and implemented in the United States. (IP,PP)

POS 417 ISSUES IN THE ADMINISTRATION OF PUBLIC POLICY (5) An analysis of the policy consequences of major issues facing political executives and administrators, including planning for the year 2000, bringing government closer to the people, the pathologies of bureaucratization, technology assessment, quantification aids in decision making, needs for policy advice, and experiments in organizational forms. (PP)

POS 418 INDEPENDENT STUDY (VAR) By arrangement with the instructor.

POS 419 POLITICS IN THE AFRO-LATIN CARIBBEAN ISLAND-NATIONS (5) The purpose of this course is to present the student with an analytical framework with which to understand the political development principally of Cuba, the Dominican Republic and Haiti, in a comparative framework and to anticipate future courses of development in the next generation.

POS 421 GOVERNMENT AND POLITICS OF THE UNITED STATES (5) An examination of the origin and development, structure and operation of the government of the United States, with an emphasis on the characteristics and political consequences of federalism. Allows the student to have a better understanding of the political system in which he lives. (PP)

POS 422 MODERN POLITICAL THEORY II (5) An analysis of the political thought of the great political thinkers of the late Eighteenth, Nineteenth, and early Twentieth Centuries. Primary emphasis will be given to the important Nineteenth Century Theorists such as J. S. Mill, Marx, and de Tocqueville. Their theoretical treatment of such modern political phenomena as the masses, bureaucracy, democracy, liberty, and violence will be extensively analyzed. (PT)

POS 423 TOPICS IN URBAN POLITICS AND POLICY (5) An examination of the processes by which social conflicts in American urban areas are represented and regulated. Emphasis is placed on how urban problems are identified and proposed solutions are formulated, legitimized, and administered by urban policy-making processes. Includes a discussion of urban political culture. Enables the student to understand the major problems confronting communities in urban areas. (PP)

POS 427 AMERICAN POLITICAL THOUGHT (5) An examination of American political thought from its 17th Century origins to the contemporary period. The continuities and discontinuities in the development of American political ideas since colonial times will receive special attention. (PT)

POS 429 CONFLICT AND COOPERATION IN THE CARIBBEAN (5) An analysis of the institutions and processes promoting and inhibiting regional cooperation in the Caribbean area. Designed to enable the student to appreciate the trend toward regionalism and the problems of interstate relations in this microcosm of the world. (CP,IP)

POS 431 POLITICAL VIOLENCE AND REVOLUTION (5) An examination of political violence and revolution in coping with and solving political problems. Includes a comparative discussion of the role of violence and revolution in other countries. Enables the student more clearly to understand the manifestations of political violence and revolution in the political events of his own time. (PT)

POS 437 POLITICAL AND SOCIAL CHANGE IN LATIN AMERICA (5) The major internal and external factors making for change in Latin America, such as industrialization, land reform, bureaucratic professionalism, and education. The role of the United States as a change agent in the area receives special attention. Enables the student to understand the dynamics of change in this important area and to compare these processes with events in his own country. (CP)

POS 439 ENVIRONMENTAL POLITICS AND POLICY (5) A systematic examination of environmental policy making which emphasizes the various steps involved in transforming private preferences into authoritative public policies. Special attention is directed at the unique political problems posed by pollution, preservation of natural areas, natural resource management, population dynamics, and ecological imperatives. Designed to enable the student, particularly the environmental studies student, to understand the overlapping policy matrices which constrain environmental action. Should enable student to identify critical decision points in the environmental policy-making process. (PP)

POS 441 POLITICS OF AUTHORITARIANISM (5) The course is designed to analyze the circumstances giving rise to non-totalitarian modern dictatorships, their political dynamics and their survival capability. (CP)

POS 442 JUDICIAL BEHAVIOR (5) An examination of the various approaches, theories, and findings on how judicial actors behave, particularly as it relates to judicial decision-making. The focus of the course will be on judges, lawyers, prosecutors, and other relevant actors in the judicial process. (PL)

POS 444 POLITICAL IDEOLOGIES (5) An analysis of modern political ideologies since the French Revolution, including liberalism, conservatism, and socialism. Particular emphasis will be given to Marxism. The contemporary link between ideology and totalitarianism will be examined. (PT)

POS 445 URBAN POLITICAL LEADERSHIP (5) A theoretical analysis and interpretation of urban political leadership with a special emphasis on the structure of political power and the decision-making process. This course attempts to provide students with an understanding of the basic structure of urban political leadership. The attitudes and values of urban political elite will also be examined. (PP)

POS 452 INTEREST GROUP POLITICS (5) An examination of the various types of voluntary associations which seek to influence the political process. Special attention is given to the role of private power in a pluralist system. Enables the student to understand the ambivalent American attitude towards pressure groups and lobbying activities in the legislative and administrative arenas. (PP)

POS 455 POLITICS AND THE ARTS (5) Employs the arts as a tool of analysis for political science. Includes literature, painting, music, and film. Special attention is given to the relationship between popular culture and political system. (PT)

POS 461 TOPICS IN POLITICS (VAR) Subject matter varies according to instructor.

POS 462 COMPARATIVE JUDICIAL POLITICS (5) An examination of the various modes of dispute settlement and rule adjudication cross-culturally. Emphasis will be upon the similarities and differences of judicial behavior, judicial decision-making, judicial recruitment, and judicial powers in cross-national analysis. (PL,CP)

POS 463 ETHNIC POLITICS (5) An examination of the influence of major ethnic groups on American politics. Special attention will be given to Black, Cuban-American and Puerto Rican interest groups. (PP)

POS 469 POLITICAL FOUNDATIONS OF INTERNATIONAL LAW (5) An examination of the interaction between politics and international law with particular emphasis upon such interaction during the present century. The role of international institutions in the modifying of existing international law concepts and the developing of such concepts is also examined. (IP,PL)

POS 471-472-473-474 (PUBLIC AFFAIRS INTERNSHIPS) (VAR) An opportunity for the student to participate in a selected policy area within one of the communities of South Florida. The nature of the work to be accomplished in connection with the internship will be worked out between student and advisor:

POS 471 — LEGISLATIVE INTERNSHIP
POS 472 — JUDICIAL INTERNSHIP
POS 473 — ADMINISTRATIVE INTERNSHIP
POS 474 — INTERNATIONAL INTERNSHIP

POS 481 TOPICS IN EDUCATIONAL POLICY (VAR) An intensive examination of selected topics dealing with educational policy. The subjects will vary, depending upon the desires of both students and faculty.

POS 484 POLITICS OF URBAN TRANSPORTATION DECISION-MAKING (5) A study of urban transportation decision-making processes, with a special emphasis on the citizen participation, the pattern of mobilization of the community support for/or against transportation policies, and the interaction with the local, state, and federal officials. The course attempts to provide students with an understanding of the decision-making process with respect to the urban transportation policy planning. The role of citizen participation, mobilization process, and their interaction with the public officials, will be analyzed. (PP)

POS 486 TOPICS IN INTERNATIONAL POLITICS (VAR) An intensive examination of selected topics with an international dimension. Subjects will vary, depending upon the desires of both students and faculty. Allows the student to choose topics of particular interest to him.

POS 488 TOPICS IN COMPARATIVE POLITICS (VAR) An intensive examination of selected political topics from a cross-national point of view. The subjects will vary, depending upon the desires of both students and faculty. Allows the student to choose topics of particular interest to him.

POS 491 HONORS SEMINAR (VAR) Subject matter varies according to instructor.

POS 492 HONORS SEMINAR (VAR) Subject matter varies according to instructor.

POS 493 HONORS SEMINAR (VAR) Subject matter varies according to instructor.

POS 495 POLITICS OF URBAN JEWISH LEADERSHIP (5) A study of the leadership structure of the Jewish community with special locus upon the Jewish elite integration process within the community power structure. The course attempts to provide students with an understanding of the nature of Jewish leadership structure and their role in the community social and political system. (PP)

POS 552 TOPICS IN PUBLIC POLICY (VAR) An intensive examination of selected topics dealing with public policy. Subjects will vary, depending upon the desires of both students and faculty. Allows the student to choose topics of particular interest to him.

POS 553 TOPICS IN PUBLIC LAW (VAR) An intensive examination of selected topics in the field of public law. The subjects will vary, depending upon the desires of both students and faculty.

POS 556 TOPICS IN POLITICS AND THE ARTS (5) An intensive examination of selected topics in the field of politics and the arts. Subjects will vary, depending upon the desires of both students and faculty. (AP)

POS 559 THE MULTI-NATIONAL CORPORATION AND CARIBBEAN DEVELOPMENT (5) An analysis of the development and role of the multi-national corporation in the Caribbean area, emphasizing its implications for the political and economic development of certain states. (CP,IP)

POS 566 TOPICS IN POLITICAL THEORY (VAR) An intensive examination of selected topics dealing with political theory. The subjects will vary, depending upon the desires of both students and faculty. Allows the student to choose topics of particular interest to him.

POS 572 TOPICS IN POLITICS (VAR) Subject matter varies according to instructor.

POS 587 TOPICS IN INTERNATIONAL LAW (VAR) An intensive examination of selected topics in international law. Subjects will vary, including for instance, the political dimension of international law, depending upon the desires of both students and faculty. Allows the student to choose topics of particular interest to him.

POS 588 TOPICS IN COMPARATIVE POLITICS (VAR) An intensive examination of selected political topics from a cross-national point of view. The subjects will vary, depending upon the desires to both students and faculty. Allows the student to choose topics of particular interest to him.

POS 607 SEMINAR IN POLITICAL THEORY (VAR)

POS 615 SEMINAR IN PUBLIC POLICY (VAR)

POS 617 SEMINAR IN INTERNATIONAL POLITICS (VAR)

POS 618 SEMINAR IN URBAN POLITICS (VAR)

POS 683 TOPICS IN POLITICS (VAR) Subject matter varies according to instructor.

# PSYCHOLOGY MAJOR

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION:

*Required course:* introductory psychology

*Recommended courses:* physics, history, sociology, philosophy, economics, mathematics

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* | | 22 |
| PSY 349 Advanced General Psychology with lab (Junior year) | 7 | |
| One other lab or field experience | 7 | |
| MAS 307 Introduction to Statistics I (Junior year) | 5 | |
| MAS 308 Introduction to Statistics II (Junior year) | 3 | |
| *Additional Psychology Courses:* | | 31-46 |
| *Recommended:* | | |
| PSY 448 Overview of Psychology (the student planning to take the psychology specialty part of the Graduate Record Examination is strongly advised to take this course) | | |
| *Courses other than Psychology and Statistics* | | 22-37 |
| | | 90 |

*Remarks:* (1) The student is strongly urged to contact the Psychology Department for advisement in curriculum planning; (2) Limited funds are available through the Psychology Department to senior students with demonstrated scholastic ability and financial need.

*Bachelor degree with Honors:*
Application must be made and departmental approval granted before the third quarter of the junior year to undertake an independent project which must be approved by and carried out under the supervision of a member of the Department. Upon completion of the study, a satisfactory oral defense of the work must be presented to a Department Committee.

*Note:* the bachelor's degree offered in this program is a liberal arts degree and not a professional degree. While it is possible to concentrate courses in one's area of interest, it is not possible at the present time to obtain a "professional specialization" at the undergraduate level in psychology.



## COURSE OFFERINGS

PSY 300 INTRODUCTORY PSYCHOLOGY (5) (F,SS) Psychological principles underlying basic processes such as percelving, learning, thinking, motivation and emotions. Students will be introduced to theories and research methods in terms of their contributions to contemporary psychology. This course will not count towards the major in psychology. It is designed for non-majors and is a prerequisite for majors who have not had an introductory course in psychology.

PSY 305 INTRODUCTORY EDUCATIONAL PSYCHOLOGY (5) (F,W,S,SS) An introduction to the ways in which the principles of psychology apply to educational practices, considering aspects of the basic processes such as development, learning, individual differences and adjustment, with special reference to the problems of teacher effectiveness and teacher-student interaction. This course is designed for students who have not had a prior course in Educational Psychology. While not designed as a course for Psychology majors, it may, under special petition, be counted as meeting an elective requirement in Psychology.

PSY 307 HUMAN GROWTH AND DEVELOPMENT (5) (F,S,SS) An introductory study of the development of personality, intelligence, and motivation from childhood to adulthood, emphasis will be placed on development of cognitive systems through social learning. This course is designed primarily for students enrolled in the Schools of Education and Health and Social Services. Students planning to major in Psychology should enroll in PSY 330.

PSY 310 PSYCHOLOGY OF WOMEN (5) (F) An examination of women from various perspectives, such as biological, anthropological, mythological, religious, historical, legal, sociological and psycho-analytical points of view. Discussion of how these various perspectives influence the psychological development of contemporary women.

PSY 311 PSYCHOLOGY OF DRUGS AND DRUG ABUSE (5) (W) This course will cover some basic information about the nature and effects of the families of drugs abused, the social and personal dynamics involved in the phenomena of drug abuse and the various rehabilitation programs currently being employed to combat drug abuse.

PSY 320 INTRODUCTION TO COMMUNITY PSYCHOLOGY (5) (F,S) An introduction to the issues and scope of community psychology. Students will be exposed to the development of community psychology as a growing discipline. Particular emphasis will be placed on the role of the community psychologist as an agent of social change.

PSY 321 PSYCHOLOGY OF RACISM (5) (W) Consideration will be given to the nature and development of institutional racism in America. The historical, social, economic and psychological aspects of racism will be examined.

PSY 323 BLACK PSYCHOLOGY (5) An examination of the social-psychological consequences of being black in America. This course will focus upon contemporary Black attitude(s) and their relationship to the historical, social and economic realities of the American Blacks' sojourn in the U.S. Specific attention will be provided the individual, the family, and their attitudes towards the broader social milieu.

PSY 330 INTRODUCTORY DEVELOPMENTAL PSYCHOLOGY (5) (F,W,SS) An introduction to human development focusing on infancy and childhood. Particular attention will be devoted to intellectual, personality, and social development. Consideration will be given to both theoretical and empirical perspectives. This course or its equivalent must be completed successfully before students may enroll in most 400 and 500 level courses in developmental psychology.

PSY 331 PSYCHOLOGY OF ADOLESCENCE (5) (W) An examination of the psychological, sociological and biological factors contributing to the changes from childhood to adolescence and from adolescence to young adulthood.

PSY 332 PSYCHOLOGY OF ADULTHOOD (5) (S) The transition from youth to middle age will be studied. Focus will be placed on changing roles in family, work, and societal settings as these factors influence personality and other aspects of psychological function.

PSY 340 PSYCHOLOGY OF CONSCIOUSNESS (5) Normal and altered states of human consciousness are analyzed from the perceptual and neuropsychological viewpoint. Broad topic areas include physiologically determined levels of arousal, from deep sleep to intense excitement, selective attention, perceptual plasticity, illusions, sensory deprivation, bio-feedback, psychosomatic disease, hypnotism and suggestibility, as well as a critical treatment of the phenomena of parapsychology.

PSY 341 PSYCHOLOGY OF CREATIVITY (5) An exploration of the psychological processes involved in the act of creation. Several approaches to the understanding of creators and their creations will be used, including the study of eminent creative people, sessions with persons including the study of eminent creative people, sessions with persons involved in creative efforts, survey of scientific studies of creation, and personal involvement and introspection by the student.

PSY 349 ADVANCED GENERAL PSYCHOLOGY WITH LABORATORY. LECTURE (2) LABORATORY (5) (F,W,S) An intensive lecture and laboratory course designed to present the basic concepts and methods of traditional and contemporary psychology. Emphasis will be placed on the role of methodology and experimentation in all phases of psychology. Students will study sensory systems, information processing, perception and other psychological processes. In addition to classroom experience, students will participate in laboratory exercises designed to illustrate concepts covered in lectures. The laboratory aspect of the course will provide students with an opportunity to develop and use skills and techniques employed in the execution of human psychological experiments, and will meet requirements of a laboratory course in experimental psychology. This course is required of all psychology majors and must be completed during the first year of residence.

PSY 350 INTRODUCTORY INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (5) (F,W) Introduction to the study of behavior in the work environment. Illustrative topics include formal and informal organization, work, motivation, satisfaction and performance, leadership, job analysis, selection, and performance evaluation, training and development, advertising and consumer behavior, and industrial clinical psychology.

PSY 360 THEORIES OF PERSONALITY (5) (F,S) An examination of various theories of personality. Consideration will be given to traditional and contemporary approaches to personality development.

PSY 361 MOTIVATION AND EMOTION (5) (F,W) Introduces several perspectives from learning theory, perception, and personality theory to explore why and how people move through their physical and social environment.

PSY 362 PSYCHOLOGY OF PERSONAL ADJUSTMENT (5) Study of personal adjustment in the social and occupational life of the individual. Emphasis on interpersonal aspects of effective behavior.

PSY 363 PSYCHOLOGY OF SEXUAL BEHAVIOR (5) An examination of the nature, development, decline and disorders of sexual behaviors primarily from the perspectives of normal adjustment and interpersonal relations. Discussion also addresses love, intimacy, and similar emotionally charged sociopsychological topics. Modern and popular treatment approaches — including the "new sex therapies" — are critically evaluated.

PSY 370 INTRODUCTORY SOCIAL PSYCHOLOGY (5) (F,W) Introduction to the study of the relationship of the individual to Social Systems including topics such as social behavior, attitude development and change, social conflict, group processes, mass phenomena and communication.

PSY 372 PSYCHOLOGY OF GIVING, HELPING AND VOLUNTEERING (5) Theories, research data, and community applications of prosocial activities, such as giving, helping, volunteering and altruism.

PSY 410 ENVIRONMENTAL PSYCHOLOGY (5) (W) An introduction to the man-environment interaction, including psychological, sociological and physical aspects.

PSY 412 PSYCHOLOGY OF LANGUAGE (5) (W) An overview of the psychology of language and the psychological "reality" of linguistic structures, behavioristic vs. cognitive views of psycholinguistics will be examined. Consideration will be given to the biological basis of language, language and thought, language acquisition, and language pathology.

PSY 413 PRINCIPLES AND THEORIES OF BEHAVIOR MODIFICATION (5) (S) Studies different approaches to the modification of problem behavior through the application of learning principles and theories.

PSY 420 PSYCHOLOGY OF SOCIAL CHANGE (5) (W) An examination of methods of implementing institutional change. Consideration will be given to alternatives such as violent vs. non-violent confrontation, the use of information as an instrument of change and others.

PSY 421 TOPICS IN COMMUNITY PSYCHOLOGY (5) (S) Various topics and current methods in community psychology will be covered. Students enrolled in this course will focus on the psychological aspects of various community problems such as drugs, racism, overpopulation, ecology, militarism, women's liberation, the youth movement, etc.

PSY 422 PSYCHOLOGY OF CONFLICT (5) This course examines the psychological factors involved in conflict situations. The focus is upon intrapersonal, interpersonal and intergroup conflict resolution and will attempt to determine their applicability to various conflict conditions such as racial, religious or international wars. The course will also consider the ultimate disintegration of the individual personality as a result of internalized conflict and will attempt to familiarize students with the psychological factors underlying varying conditions of conflict and its ultimate resolution.

PSY 429 COMMUNITY PSYCHOLOGY FIELD EXPERIENCES I (7) (F) Students will be organized into task oriented teams or will work independently in the community for the purpose of becoming familiar with various community institutions and for developing an action plan for assisting institutions in implementing change. Students enrolled in this course should have successfully completed Introductory Community Psychology.

PSY 430 LANGUAGE ACQUISITION (5) (S) An examination of how children acquire language, based on experimental findings from contemporary linguistic, psycholinguistic and behavioral theory.

PSY 431 COGNITIVE DEVELOPMENT (5) (S) An examination of developmental changes in the nature of children's thought processes. Particular emphasis will be given to the theories of Jean Piaget. Prerequisite: Students should have successfully completed a course in introductory developmental psychology or its equivalent.

PSY 432 CHILDREN'S LEARNING (5) (W) Learning in infancy and childhood with particular emphasis on simple conditioning, discrimination shifts, mediation, transposition, observational and concept learning. Students enrolling in this course should have completed successfully at least one prior course in developmental psychology.

PSY 433 SOCIAL AND PERSONALITY DEVELOPMENT (5) (W) An examination of the genetic, familial, and societal factors influencing the development of a child's personality and his social behavior. (Offered alternate years.)

PSY 434 PSYCHOLOGY OF AGING (5) An examination of the factors which contribute to the psychological profile characterizing old age. Biological and sociological components will be considered and their impact on perceptual, cognitive, and personality processes will be analyzed. Students enrolling in this course should have successfully completed at least one prior course in developmental psychology.

PSY 435 PSYCHOLOGY OF MORAL DEVELOPMENT (5) (F,W,S) The course is intended to be a critical survey of psychological theories and psychological research concerning the development of moral attitudes and behavior; and the application of research in moral development to social problems. Emphasis will be given to those theories that have generated a substantial body of empirical research. The major theories to be reviewed will include psychoanalytic theory (Freud, and the ego psychologists), cognitive developmental theory as it is applied to the development of moral judgment (Piaget, Kohlberg, etc.) and social learning theory (Aronfreed, Bandura, Hill, etc.).

PSY 439 DEVELOPMENTAL PSYCHOLOGY: LECTURE (2) AND LABORATORY (5) (F,S) Laboratory/observation exercises illustrative of the concepts and research techniques used in developmental psychology. Particular emphasis will be given to cognitive and social-cognitive development.

PSY 440 CURRENT EXPERIMENTAL THEORIES (5) (F,S) The stress in this course is upon current specific theories determining the nature and direction of the research and interest in the several important areas such as psychophysics, learning and remembering, developmental patterns and motivation, personality, etc. Topics to be covered will be announced at the beginning of the academic year. May be taken twice for credit toward the major.

PSY 441 SENSATION AND PERCEPTION (5) (F) Basic concepts in sensation and perception will be explored, with an emphasis on models of peripheral and central neural processing. Topics such as receptor function, brightness and color vision, movement and object perception, perceptual memory and pattern recognition will be considered. Psychophysical techniques such as subjective magnitude estimation and signal detection theory will be offered.

PSY 442 COGNITIVE PROCESSES (5) (W) Investigation of the mental processing underlying experiences and behavior. Topics will include games, puzzles, and problems; intuitive and creative thought; conceptualization, reasoning and clinical diagnosis; choices and decisions, conceptions of time and space; and thought in abnormal or altered states of consciousness.

PSY 443 INTRODUCTORY BIO-PSYCHOLOGY (5) (F) A study of the more important psychobiologic correlates of behavior in basic psychological phenomena. Open only to majors in the senior year or otherwise qualified students.

PSY 448 OVERVIEW OF PSYCHOLOGY (5) (W) A consideration of the historical origins and developments of modern psychology as a viable discipline, in light of the major influences upon its growth. Prerequisite; 20 quarter hours in upper division psychology courses.

PSY 449 HUMAN LEARNING AND REMEMBERING: LECTURE (2) AND LABORATORY (5) (S) Lectures on the research and theoretical contributions to the understanding of human learning and remembering, and laboratory exercises illustrative of the concepts and techniques used in the conduct of experimental studies of human learning and remembering. Students who have not had Advanced General Psychology With Laboratory should first complete successfully PSY 349.

PSY 450 SOCIAL PSYCHOLOGY OF ORGANIZATIONS (5) Survey of the theoretical and methodological issues in the study of organizational structures and environments, focusing on social processes as constraints on organizational functioning.

PSY 451 PERSONNEL PSYCHOLOGY (5) Techniques and procedures applicable to the selection, placement, utilization, and evaluation of personnel in organizations will be considered. The emphasis will be on empirical procedures rather than the management function in the personnel area. Topics such as quantitive methods and models for selection, criteria analysis, performance appraisal, management training, and job satisfaction will be discussed. Prior course in Statistics *strongly recommended.*

PSY 452 CONSUMER PSYCHOLOGY (5) (F,W) This course will study and review the psychological components contributing to satisfactions and dissatisfactions in buying and selling transactions. It will also study the consequences of such transactions as they affect the environment in which we live as well as society in general. The interface between business, labor, government and the consumer — as all four groups are involved in consumer affairs — will be objectively analyzed.

PSY 453 SEMINAR AND FIELD WORK IN CONSUMER PSYCHOLOGY (7) (S) Students will work individually or in teams on topics and issues relevant to the needs of South Florida. The Research Projects approved will require gathering and analyzing of data calculated to help reduce or solve current consumer affairs problems. Emphasis will be placed on methods and measurements used by psychologists. It is recommended that students complete the course in Consumer Psychology prior to registering for this course.

PSY 459 INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY LECTURE (2) AND LABORATORY (5) Students will gain experience with the use of psychometric instruments in the areas of job analysis, personnel selection, performance appraisal, job satisfaction, criteria analysis, and management training and development. Prerequisites: Statistics, and Introductory Industrial/Organizational Psychology, or Personnel Psychology, or Personnel Management, are recommended.

PSY 460 PSYCHOLOGY OF INDIVIDUAL DIFFERENCES (5) The uniqueness of each human being is discussed with reference to human differences and similarities. Principles and theories of contemporary psychological tests which underlie personality, intellectual and skill differences are presented.

PSY 461 ABNORMAL PSYCHOLOGY (5) (W,S) Various forms of behavior pathology are examined in the light of traditional and current concepts of mental health and illness. Problems of diagnosis and treatment will be discussed. Role of social mores is adduced.

PSY 462 TOPICS IN PERSONALITY (VAR) (F,W,S,SS)

PSY 463 HUMANISTIC PSYCHOLOGY (5) Studies the methodology, research and findings of the humanistic orientation in psychology. Topics such as counseling, encounter groups, higher consciousness, bio-feedback, intentional communities, education, mysticism and religion are examined from the humanistic viewpoint. Completion of a course in theories of personality is recommended.

PSY 464 PSYCHOLOGY OF DREAMS AND DREAMING (5) An in-depth examination of the most important psychological theories of dream function and of the use of dreams in different therapeutic approaches. The current research on the physiology and psychology of sleep is also evaluated. Students should have successfully completed a course in Theories of Personality or its equivalent.

PSY 465 TREATMENT OF BEHAVIOR DISORDERS (5) Current approaches to the treatment and improvement of psychological disorders are critically surveyed. Emphasis is placed on the examination of the various techniques of psychotherapy and behavior therapy. Broader strategies of prevention and mental health promotion, like consultation, counseling, and programmed agency services are also studied.

PSY 469 DIFFERENTIAL PSYCHOLOGY: LECTURE (2) AND LABORATORY (5) Lectures and laboratory field experiences in the principles and methods underlying the administration, construction and evaluation of psychological tests, and practice in the administration and interpretation of selected psychological tests. Students who have not had an introductory course in statistics should first complete successfully MAS 307 or its equivalent.

PSY 470 THEORIES OF HUMAN RELATIONS (5) (S) Research methods and findings on the topic of interpersonal interaction in face-to-face situations. Emphasis on content of research methods and findings rather than in-class experiences.

PSY 471 SMALL GROUP BEHAVIOR (5) (F,W) Introduction to the study of the structure and function of groups emphasizing the behavior of individuals as affected by the group. The course will focus upon experimental evidence concerning such topics as social facilitation, group decision making, phases in group development, physical factors in group behavior, etc., rather than upon student personal experience in sensitivity or encounter training.

PSY 473 SOCIAL MOTIVATION (5) Focuses upon those sources of human motivation which are a consequence of man's social-interpersonal environment and his striving to obtain socially valued goals. Topics discussed include test-taking anxiety, alienation and affiliation motivation, internal vs. external orientation, achievement motivation, etc. The measurement of social motives and their roots and consequences for behavior will be discussed.

PSY 479 EXPERIMENTAL SOCIAL PSYCHOLOGY: LECTURE (2) AND LABORATORY (5) (S) The primary purpose of this course is to have students conduct actual social psychological experiments. Lecture material will be secondary to and in the interest of allowing students to execute representative experiments in areas such as attitude measurement and change, conformity, group structure and communication, etc.

PSY 480 SPECIAL TOPICS IN PSYCHOLOGY (VAR)

PSY 481 PSYCHOLOGICAL ASPECTS OF INTERNATIONAL RELATIONS AND CONFLICT (5) (W) A study of the psychological, especially social, factors in the dynamics of international behavior interactions which may increase or decrease tensions and conflicts.

PSY 482 ATTITUDES AND ETHNICITY: A CROSS-CULTURAL PSYCHOLOGICAL APPROACH (5) Comparative study of the attitudes and practices of racial and ethnic groups toward each other in a variety of cultural and national settings.

PSY 483 PSYCHOLOGICAL INFLUENCE OF CULTURE ON LEARNING AND THINKING (5) An analysis of the research and theory relating cultural and societal influences of learning and thinking. Consideration will be given to the controversies concerning assessment, individual and group differences. Prior course work in developmental psychology would be helpful.

PSY 490 INDEPENDENT READINGS IN PSYCHOLOGY (VAR) Limited to qualified students who have permission from a faculty member and who present a plan of study including area and objectives. Students enrolled in this course will be expected to have regularly scheduled meetings with their faculty advisor, and to submit a written report of their study.

PSY 491 INDEPENDENT FIELD EXPERIENCES IN PSYCHOLOGY (VAR) Limited to qualified students who have permission from a faculty member and who present a plan of study including area and objectives. Students enrolled in this course will be expected to have regularly scheduled meetings with their faculty advisor, and to submit a written report of their experiences.

PSY 492 INDEPENDENT RESEARCH IN PSYCHOLOGY (VAR) Limited to qualified students who have permission from a faculty member and who present a written proposal for research. Students enrolled in this course will be expected to have regularly scheduled meetings with their faculty advisor, to conduct the research, and to submit a written report of their research.

PSY 498 SENIOR SEMINAR IN PSYCHOLOGY (2) An advanced seminar for seniors. Analysis of major contemporary trends in psychological theory and research.

PSY 499 HONORS RESEARCH PROJECT (VAR) Limited to qualified seniors seeking honors in psychology. Students must submit a research plan and have a research advisor selected who has approved the research project prior to enrollment in the course. A written report of the research in the A.P.A. publication style must be submitted for evaluation before credit will be awarded.

PSY 529 COMMUNITY PSYCHOLOGY FIELD EXPERIENCES II (7) (W) Same orientation and description as Field Experience I. Students in this course will be able to pursue their work with community institutions in more depth. Students enrolled in this course must have completed Field Experience in Community Psychology I.

PSY 530 CULTURE AND CHILDHOOD (5) (W,S) An examination of cultural and societal influences on children's motor, perceptual, intellectual, and personality development. Extensive readings in the cross-cultural research literature will serve as the focus for class discussions and independent projects. The course is designed for seniors and graduate students.

PSY 531 DISORDERS OF LANGUAGE IN CHILDHOOD (5) (F) This course focuses on the failure of children to acquire normal speech and language. The various causes of such disorders and theories to account for failure to acquire language are considered. Techniques for assessing language disorders in children are evaluated. Students enrolling in this course should ordinarily have completed at least one course in developmental psychology.

PSY 547 THEORIES OF LEARNING (5) The major theoretical systems of learning will be covered with the intent of determining how well each accounts for the phenomena of learning. Emphasis will be placed on exploring the controversial issues raised by extant theories and the experimental resolution of these theoretical controversies. The impact of theory on current thinking about learning will be considered.

PSY 548 METHODS OF PSYCHOLOGICAL RESEARCH (5) A practicum course in behavioral research in which an investigation is planned, carried out, analyzed, and reported. Discussion will be directed to experimental, quasi-experimental, and non-experimental designs, obtrusive and unobtrusive measures, mathematical and logical tools for analysis of results, uses of the computer for data collection and analysis, and ethical considerations in research on human populations. Prerequisite: permission of the instructor.

PSY 549 ADVANCED EXPERIMENTAL PSYCHOLOGY: LECTURES AND LABORATORY (7) Lecture and laboratory course investigating experimental research in the fundamental processes of human behavior. These include perceptual, cognitive, and linguistic processes. Students enrolling in this course should have successfully completed PSY 349, MAS 307 and MAS 308.

PSY 560 PERSONALITY DYNAMICS (5) (S) A review of different approaches to the study of personality dynamics and of the related therapeutic modalities. Special consideration is given to psychoanalysis and neo-analytic psychology. Other therapeutic models which influence current psychological thought are also considered. Students should have successfully completed a course in theories of personality or its equivalent. Instructor's permission required.

PSY 561 CURRENT ISSUES IN MENTAL HEALTH (5) A critical, intensive examination of selected, important issues in mental health. Emphasis is given to the empirical study of contemporary problems related to the making of mental health patients; planning, programming and administering mental health services; political, ethical and legal constraints on the operation of mental health facilities; interdisciplinary cooperation among helping and human service professionals; and evaluation of preventive care and treatment services. Prerequisite: Abnormal Psychology or permission of the instructor.

PSY 563 ADVANCED BEHAVIOR PATHOLOGY (5) Advanced study of the causes, psychopathology, manifestations and social and personal consequences of behavior disturbance. Emphasis is placed on the critical examination of current research on the biological, psychological and social aspects of these disorders. Clinical approaches to diagnosis, course and prognosis in the contemporary mental health context (including "practicum" assignments if feasible) will be covered.

PSY 570 ADVANCED SOCIAL PSYCHOLOGY (5) (W) An in-depth examination of the role of social psychology in the social sciences and the major substantive problems as they relate to contemporary societal issues. Students enrolling in this course should have completed successfully at least an introductory course in social psychology or its equivalent.

PSY 580 SPECIAL TOPICS IN PSYCHOLOGY (VAR) (F,W,S,SS)

PSY 601 SPECIAL TOPICS IN EDUCATIONAL PSYCHOLOGY (VAR) An intensive analysis of a particular topic in educational psychology. Students will have to have topics approved by the instructor prior to registration. Open only to advanced and graduate students in the School of Education.



## SOCIAL SCIENCES INTERDISCIPLINARY MAJOR

DEGREE: *Bachelor of Arts* *Students interested in teacher certification see note on page 5.

LOWER DIVISION PREPARATION:

*Required Courses:* None

*Recommended Courses:* anthropology, economics, political science, psychology, sociology, urban/environmental studies, mathematics, philosophy, statistics.

UPPER DIVISION PROGRAM:

| | Quarter Hours |
|---|---|
| *Required Courses:* | **55-70** |
| Social science courses, including one upper division course from the following departments: Political Science and Government, Psychology, Sociology/ Anthropology, and non-social science courses. MAS 307 Introduction to Statistics* (5) | |
| *unless the Statistics requirement, or its equivalent, was completed prior to admission. If MAS 307 is taken at the University, it must be taken during the first or second academic quarter of enrollment. | |
| SSC 500 Social Sciences Advanced Interdisciplinary Seminar (5) | |
| *Electives:* | **20-35** |
| | **90** |

*Remarks:* in addition to the above requirements, the student is required to complete an independent project conducted under the supervision of a faculty committee and present an oral defense of the work.

## SOCIOLOGY MAJOR

Sociology is part of the Department of Sociology and Anthropology and all information should be obtained from that department's office.

DEGREE: *Bachelor of Arts*

LOWER DIVISION PREPARATION: Ninety quarter hours (60 semester hours) or the Associate of Arts degree from a community college; work should be pre-Arts and Sciences, or pre-Anthropology or Sociology if such programs exist. If the student does not have an AA degree, his background must reflect an ability to handle advanced academic work.

*Required Courses:* introduction to cultural anthropology, or introduction to physical anthropology, or introduction to sociology.

*Recommended Courses:* (1) other anthropology or sociology courses, (2) ecology, economics, geography, history, political science, psychology, (3) arts, biology, English, foreign language, mathematics, philosophy.

UPPER DIVISION PROGRAM

| | | Quarter Hours |
|---|---|---|
| *Required Courses:* | | **60** |
| *Core Courses:* | | |
| ASC 301 Anthropological Theories | 5 | |
| ASC 302 Sociological Theories | 5 | |
| ASC 303 Research Methods | 5 | |
| ASC 304 Ethical Issues in Social Science Research | 5 | |
| *Area Courses:* either sociology or anthropology | 40 | |
| *Electives:* with approval of the faculty advisor | | **30** |
| | | **90** |

NOTE: A student with special interests may consult faculty advisors to plan an individualized program of study.

*Field Work Experience* — A meaningful understanding of anthropology and sociology can best be developed through the interplay between theory and research. Each student will be encouraged to work outside of the formal classroom under faculty supervision.

*Minor in Sociology/Anthropology*

*Prescribed Courses:*

25 credits in the Department of Sociology-Anthropology including the following:

2 courses chosen from among the four core courses required of departmental majors (ASC 301 Anthropological Theories, ASC 302 Sociological Theories, ASC 303 Research Methods, ASC 304 Ethical Issues in Social Science Research.)

# COURSE OFFERINGS

ASC 301 ANTHROPOLOGICAL THEORIES (5) This course examines the process of theory building and explanation in the social sciences and outlines the historical and philosophical foundations of anthropological thought. Theorists and schools of thought reviewed include Darwin and evolution, Boas and historical particularism, Freud and culture and personality, and Malinowski and functionalism.

ASC 302 SOCIOLOGICAL THEORIES (5) Examines the emergence of sociology as the study of social relations. Compares and contrasts the work of selected theorists with respect to their methodologies, treatment of the emergence and consequences of modern society, political sociology, conception of social class and analysis of the role of religion in society. The student is expected to gain in-depth knowledge of opposing theories as well as an appreciation of the contingent nature of sociological theories.

ASC 303 RESEARCH METHODS (5) An introduction to the scientific method and its application to anthropological and sociological research. Topics include formulation of research problems, research design, field methods and collection of data, hypothesis testing and interpretation of results.

ASC 304 ETHICAL ISSUES IN SOCIAL SCIENCE RESEARCH (5) An introduction to the problems and possibilities of ethical premises in the perspectives and work of social scientists. Examination of historical interrelationships between moral philosophies and developing scientific methodologies. Analyses of contemporary social ethicists' attempts to assume moral postures while examining social relations. Case studies involving issues such as nation-building in areas of accelerated change including Africa and Asia.

SOC 301 THE SCOPE OF SOCIOLOGY (5) Introduction to the field of sociology with particular emphasis on scope and limitations. Basic but major divisions of the discipline will be introduced. Vocabulary, conceptualizations, research approaches, and vocational opportunities will be reviewed. The relationship of theory and empirical study will be stressed. (Also recommended for non-majors.)

SOC 302 THE BASIC IDEAS OF SOCIOLOGY (5) The course will introduce the student to the ideas of community, authority, status, alienation and the sacred as used in sociological literature.

SOC 311 THE INDIVIDUAL IN SOCIETY (5) Introduction to the study of the individual as a social being with particular emphasis on man's social origins, human perceptions, and the interaction of the individual and the group within society.

SOC 312 SMALL GROUPS (5) Survey of small group studies, their development and the associated theoretical schools of thought. The significance of small group studies for social theory is evaluated.

SOC 313 COLLECTIVE BEHAVIOR (5) The study of human behavior as found in relatively unstructured forms such as crowds, riots, revivals, public opinion, social movements, and fads. The interplay of such behavior and the rise of new norms and values are analyzed.

SOC 321 CRIMINOLOGY (5) An introduction to the study of criminal behavior, its evidence in society, society's reaction to the subjects involved, and the current state of theoretical thought on causality and treatment.

SOC 322 DELINQUENCY (5) An analysis of behavior which is extra legal with major concentration on its appearance among young people (juveniles) and society's response. Particular emphasis is given to the dynamic thrusts being made in establishing juvenile rights as a distinct part of human or civil rights.

SOC 323 SOCIAL DEVIANCY (DEVIANT BEHAVIOR) (5) The study of behavior that counters the culturally accepted norms or regularities. The social implications of deviancy are reviewed and theoretical formulations regarding deviant behavior are analyzed.

SOC 331-332-333-334-335 COMMUNITY SOCIOLOGY COURSES (5) Special courses dealing with community programs such as Model Cities, voluntary organizations, United Fund, inner city schools, public service agencies. Faculty will come from community agencies, and course work will focus on local problems.

SOC 341 THE COMMUNITY (5) The social group known as the community is identified and analyzed for its distinctive qualities. By distinguishing it from other social groups its dominating force on the behavior of its members is recognized. Attention is given to the interaction of individuals and groups as they exist within the community.

SOC 342 THE SOCIAL SYSTEM (5) The study of society as a system, the benefits of such a conceptual approach, and related theoretical constructs are compared.

SOC 343 SCHOOL AND SOCIETY (5) A specialized course dealing with the place of schools (particularly public) in society and the import of social criteria for school personnel and the influence of such criteria on the educational processes within the school system (institution).

SOC 345 HUMAN INTERACTION LABORATORY (5) Laboratory designed for those persons seeking to increase their effectiveness in task-oriented, problem-solving work groups. It explores processes of personal growth and development and human group interaction.

SOC 351 INTRODUCTION TO POPULATION ANALYSIS (5) An introduction to the study of population analysis. Classifications by age, sex, occupation, or other criteria and the significance of such data for analyzing major social trends are studied. The import of statistical records such as births, deaths, marriage registrations and census data is reviewed and analyzed.

SOC 352 HUMAN ECOLOGY (5) An introduction to the adaptive processes social beings make to their environment with particular emphasis on spatial distributions of inter-related social facts such as crime rates and population characteristics or poverty and housing conditions. Current studies on social inter-relationships and physical environments are introduced.

SOC 361 SOCIAL INSTITUTIONS/ORGANIZATION (5) An introduction to more formalized behaviors that tend to provide accepted, orderly, and enduring procedures for groups having more than narrow interests and which perpetuate themselves and continue their existence as a group. These institutionalized ways of behavior are associated with specific institutions and studied comparatively.

SOC 363 MARRIAGE AND THE FAMILY (5) An introduction to the intensive study of the kinship relationship of man known as the family. The family is distinguished from other social units and behaviour variations of this special unit are analyzed and associated with special functions. Contemporary manifestations of the family and the dynamic changes indicated are considered.

SOC 371 SOCIAL PROBLEMS (5) An introduction to the concept of a social problem and the approaches used to understand more fully the total dimensions of some specific problems. Special emphasis is given to clarifying one's understanding of the underlying nature for selected social problems, an analysis of those aspects amendable to remedy, and an inventory of the knowledge and skills available.

SOC 381 SOCIAL CHANGE (5) The study of major shifts in focus for societies or culture is covered, and the course defines indicators associated with such changes. Particular attention is given to the development of industrial societies and the study of the dynamics involved for nations emerging from various stages of "underdevelopment."

SOC 402 BASIC RESEARCH DESIGN (5) Advanced course in social research which provides research practicum for studying patterns of human behavior, analyzing findings of studies methodical and analytical procedures, reporting and explaining these results, and applying these inferences to concrete situations, also acquaint the student with the use of computers in research in the behavioral sciences.

SOC 403 ADVANCED SOCIAL THEORY (5) An analysis of various classical and current sociological theories with particular attention paid to their conceptions of man in society and the wider implications such conceptions have for their theoretical perspective. The theories of Durkheim, Parsons, Weber, Goffman, Bendix and Dahrendorf will be examined.

SOC 404 ETHNOMETHODOLOGY (5)

SOC 405 THE CLASSICAL TRADITION IN SOCIAL THEORY (5) An examination of the classical theorists in sociology — included are Marx, Weber, Durkheim, Pareto, Toonies, and Freud.

SOC 406 SOCIOLOGY OF THE 20th CENTURY (5) An examination of the sociological implications evident in the events of our modern world. Heavy reliance is placed on intellectual materials other than social science, especially literature.

SOC 411 ROLE THEORY (5) An analysis of the relation between man and society from the perspectives of role theory. The course explores the effect society has on individual biography and action.

SOC 412 SYMBOLS AND SOCIETY (5) An analysis of the effect of culture on the individual and on society. The roles of popular and intellectual culture life will be examined.

SOC 413 MASS CULTURE (5)

SOC 414 SOCIOLOGY THROUGH FILM (5)

SOC 421 THERAPY AS A SOCIAL INSTITUTION (5) An analysis of psychotherapy from the sociological perspective. The effect of therapy on society and its functioning in society are also analyzed. Comparable institutions in other societies are examined.

SOC 422 CLINICAL SOCIOLOGY (5) The problems of alienation, anomie, and happiness will be analyzed. A third position between social work and social change will be sought. Personal adjustment, social revolution, and individual calculation will be weighed as responses to the demands of social life.

SOC 431-432-433-434-435 AREA STUDIES: SOCIAL STRUCTURES AND PROBLEMS (5) Special courses on the social structures and related sociological problems of specific geographical and cultural areas. To be offered at various times.

SOC 436 LATIN AMERICAN AND CARIBBEAN SOCIAL STRUCTURES (5) The types of social structures, statuses and roles and the resulting distributions of power and authority in the hemisphere.

SOC 441 COMMUNITY ORGANIZATION (5) An intensive study of how communities are organized, with special emphasis on the interactive process of the varied components of a community. Special study permitting students to concentrate on interest areas is required.

SOC 442 COMPARATIVE SOCIAL SYSTEMS (5) The study of varied social systems particularly as to those qualities regularly occurring in each and those which differ. Such variables are then analyzed for associational correlates to the systems studied.

SOC 445 MACRO-SYSTEM CHANGE LABORATORY (5) This laboratory uses a macro-systems approach to develop an understanding of human behavior and processes of social change operating on organizational, institutional, community and national levels.

SOC 446 SOCIOLOGY OF SCIENCE (5) A sociological analysis of the generation, development, and consequences of science as a social institution.

SOC 451 URBAN SOCIOLOGY (5) The study of society as manifested in the urban community with particular attention given to the problems associated with urban life. The development of urban societies is reviewed historically and factors associated with this development are identified.

SOC 452 RURAL SOCIOLOGY (5) The study of agrarian society, pre-urban, pre-city societies. Distinctive factors associated with such social life are identified, and particular attention is given to defining indicators associated with rural society.

SOC 455 MAN, SOCIETY AND TECHNOLOGY (5) The study of contemporary society, man's role in it, and effects of technological change. A study of the interrelationships with special attention given to vocational study and instruction within the framework of the relationships perceived.

SOC 461 SOCIAL STRATIFICATION (MOBILITY) (5) The study of society structured hierarchically with particular attention given to the form and content of the various levels. Problems in the social order and differential human behaviors associated with stratification are analyzed.

SOC 462 THE PROBLEM OF BUREAUCRACY IN THE MODERN WORLD (5) The course deals with the microsociological problems of the internal organization of bureaucracies and with relation between bureaucracy and personality, with the macro-sociological problems of the emergence of the bureaucratic form, bureaucratiza-

tion and contemporary life, as well as with general problems of affluence, meaningless activity, how to beat the bureaucracy, and bureaucracy and atrocity.

SOC 463 COMPARATIVE FAMILY SYSTEMS (5) The study of family organization and function in selected major world cultures. Emphasis is given to the inter-relationships of the family, the economic system, urbanization, and human development.

SOC 464 STUDIES IN COMPARATIVE LIFE STYLES (5) A problem oriented course emphasizing the differential behavior associated with categories such as nationalism, social class, income distribution, and political or religious affiliation.

SOC 465 HEROIC ELITES (5) A seminar devoted to attempts by selected Third World leadership groups to resolve perceived problems of underdevelopment and imperialism. Ideological justifications for such activities are analyzed. Prerequisites: ASC 302 (SOC 406, SOC 467 recommended). Permission of instructor required.

SOC 466 IMPERIAL DEVELOPMENT (5) A seminar devoted to study of the relationship between colonialism and development in the contemporary Third World. Prerequisites: ASC 302 (SOC 406, SOC 467 recommended). Permission of instructor required.

SOC 467 SOCIAL THEORY AND THIRD WORLD INNOVATIONS (5) An examination of the contributions to social theory by intellectuals of the Third World. Particular attention is paid to theory derived from classical Marxism.

SOC 470 SEMINAR IN THE SOCIAL SCIENTIST'S ETHICS (5) An upper-level seminar emphasizing particular ethical considerations of import to the peculiar role and function of sociologists and anthropologists. Special attention to the interrelation of specific social scientific studies and their moral consequences, domestic and international. Prerequisite: ASC 304.

SOC 471 MINORITIES (RACE AND ETHNIC RELATIONS) (5) The study of social groups identified by racial or ethnic characteristics. Particular emphasis is given to their role in society, especially that society of which they are a part and the interactive process resulting from contact with the majority. Social behaviors of minorities are reviewed and related to institutional structures and their accepted norms.

SOC 472 THE ROLE OF WOMEN IN CONTEMPORARY SOCIETY (5) A concentrated study of women in society, role origins and their development in contemporary society. Particular attention is given to how such behaviors became normalized and the rapidity with which they change.

SOC 473 HEALTH AND WELFARE DELIVERY SYSTEMS (5) A review of the varied systems servicing society's health and welfare needs. Attention is given to the institutional origins of such systems and their propensity for change and modification. Studies reflecting evaluative considerations for such systems are reviewed.

SOC 474 SOCIOLOGY AND SOCIAL PLANNING (5)

SOC 475 SOCIOLOGY OF REAL ESTATE AND LAND USE (5)

SOC 476 SOCIOLOGY OF THE UNDERPRIVILEGED SOCIETIES (5) An examination of the various theories concerning what is happening in the "underdeveloped world." The political, social, and economic events of these societies are subjected to sociological analysis.

SOC 477 SOCIOLOGY OF MEDICINE (5) The social organization of medical institutions and the social factors associated with incidence of physical/mental illness and its treatment. Opportunity available for students to pursue specialized interests related to public needs and medical services.

SOC 478 SOCIOLOGY OF RELIGION (5) The study of religious institutions, their structure and function in various societies. Leadership qualities, participation and practices, and the relationship of religious institutions to other social institutions are studied.

SOC 479 POLITICAL SOCIOLOGY (5) The underlying social conditions of political order, political process and political behavior are explored. Examples will be drawn from empirical and theoretical studies of power, elites, social class and socialization.

SOC 480 SEMINAR IN RELIGION AS A SOCIAL INSTITUTION (5) An upper-level seminar in which two or more religious systems are compared in terms of their social origins and social-political consequences. Emphasis on the socio-economic-political impact of particular religious institutions such as the Black church in the United States, revitalization movements among Third World peoples.

SOC 481 COMPARATIVE SOCIOLOGY (5) A cross-cultural and cross-national survey of sociological studies with particular emphasis on theoretical and methodological issues. Examples will be drawn from studies on culture patterns, social structure, sexual mores, power relationships and the ethical implications of cross-national research.

SOC 482 COMPARATIVE SLAVE SOCIETIES (5)

SOC 483 HISTORICAL SOCIOLOGY (5) The authenticity and meaning of historical data for sociological research. Systematic theories in history are analyzed for their utility in sociology. Particular emphasis will be placed on the sociological uses of the comparative method in history.

SOC 484 PRECAPITALIST SOCIAL STRUCTURES (5)

SOC 485 SEMINAR IN ETHNICITY (5) An upper-level seminar stressing a comparative sociological approach to the study of two or more racial-ethnic groups. Emphasis on the interrelations of ethnic communities within the same society and the socio-political effects of the relations. Prerequisite: Minorities, SOC 471 or permission of Dept.

SOC 491 SOCIAL CONFLICT (5) The study of conflict in society and its place in social relationships. A study of causes and resolutions with particular emphasis on methods of resolution and their influence on social change.

SOC 492 SOCIOLOGY OF SOCIOLOGY (5) An analysis of the disciplines of Sociology and Anthropology using the tools developed by those disciplines themselves. The political, social and economic contexts of the field are examined to see how the discipline is used, for what advantages, and to what effect.

SOC 493 BASIC ASSUMPTIONS OF SOCIOLOGY (5) An analysis of the basic assumptions underlying the different perspectives in Sociology and Anthropology.

SOC 494 INTELLECTUAL PRECURSORS OF SOCIOLOGY (5) An analysis of social ideas from which sociology emerged. The ideas of Aristotle, Hobbes, Rousseau, and Marx, among others, will be discussed as contributions to the emergence of Sociology.

SOC 495 SOCIOLOGY OF UTOPIA (5) An analysis of utopian thinking in Sociology and Anthropology as well as the sociological implications of utopianism.

SOC 496 SOCIAL CONFLICT IN MULTI-ETHNIC SOCIETIES (5) Cases are selected from a variety of societies with differing types of majority-minority situations. Prejudice and discrimination are seen as weapons in group and class conflict. The consequences of prejudice are analyzed in terms of the costs to every group in the society.

SOC 497 HONORS SEMINAR (S) Permission of instructor needed.

SOC 498 DIRECTED INDIVIDUAL STUDY (VAR) Supervised readings and/or field research and training. May be repeated.

SOC 499 DIRECTED FIELD RESEARCH (VAR) Permission of instructor required.

SOC 511 SOCIOLOGY OF ART AND LITERATURE (MODERN) (5)

SOC 572 SOCIOLOGY OF LAW AND LEGAL PROCESSES (5)

SOC 581 INDUSTRIAL SOCIOLOGY (5) Concentrated study of industrialization and the sociological theory involved. Manpower, unemployment, apprentice programs, classificatory schemes are subject matter studied.

SOC 582 SOCIOLOGY OF EDUCATION (5) An analysis of education as a social process and the interrelationship of educational systems and society. The study of education as a socialization process, the social structure of education, and the role played as an agent in social change are emphasized.

SOC 586 SOCIOLOGY OF KNOWLEDGE (5) The study of the theoretical bases of knowledge and the interrelatedness of social factors, particularly as knowledge relates to institutional forms of behavior.

SOC 587 SOCIOLOGY OF MENTAL HEALTH (5) A concentrated study of mental illness with particular emphasis on definitional conceptualizations and the relationship of such to incidence data. Includes study of the social factors on the etiology of mental disorders and the epidemiology of such illnesses. Family effects of mental illness discovery and treatment are assessed and mental health programs and their effectiveness are reviewed.

SOC 589 CONFLICT RESOLUTION: SOCIETY AND LABOR (5) A concentrated study of conflict as evidenced in labor's relationship to society. The development of methods of resolution and an assessment of the prevailing approaches. Attention is given to the historical roots of labor's development as a distinct social entity and the tensions precipitated within different societies and their varied economic and political systems.

SOC 590 ADVANCED URBAN SOCIOLOGY (5) A concentrated study of urban problems. Emphasis given to social policy and the role of public and private agencies in sustaining, administrating and changing such policy. Urban problems are studied as an intermix of social, cultural, political and economic factors. Methods of social cost analysis are discussed.

SOC 591 DIRECTED INDIVIDUAL STUDY (VAR) Supervised readings and/or field research and training. May be repeated.

SOC 592 DIRECTED FIELD RESEARCH (VAR) Permission of instructor required.



# CERTIFICATE PROGRAMS

## BLACK STUDIES

*Director:* Melbourne S. Cummings (English)

*Coordinating Committee:* Luretha Lucky (Education), Dominic Mohamed (Education), Marvin Dunn (Psychology), Rose Foster (Health and Social Services)

The certificate in Black Studies will be awarded to the student who has demonstrated competence in course work pertaining to the study of Afro-America and/or Africa, as well as the individual for whom work in Black Studies would serve to assist in career planning or advancement.

A student is able to acquire a Certificate in Black Studies by fulfilling the following requirements:

1. The successful completion of at least 30 hours in Black Studies courses which are outlined below.
2. At least 15 hours of the course work must be taken at FIU.
3. Courses must be selected from at least two different departments. Fulfilling the requirements in Black Studies does not preclude the students' meeting the requirements of their major fields appropriate to their degrees.

The student is allowed to choose his or her courses for the Black Studies Certificate Program from this list:

Anthropology

ANT 403 Racial and Cultural Minorities (5)
ANT 411 The Rural Poor: Migrants, Sharecroppers and Tenant Farmers (5)
ANT 420 Cultures of the Caribbean (5)
ANT 423 Afro-American Anthropology (5)
ANT 426 Ethnological Survey of Africa (5)

Economics

ECO 329 Economics of Race and Sex Discrimination (5)
ECO 520 Urban and Regional Economics (5)

Education
PPS 508 Educational and Vocational Guidance (5)*

*to be refocused on minority situations (Career Exploration and Guidance for the Minority and Disadvantaged)

English
ENG 380 Survey of Afro-American Literature (5)
ENG 422 Rhetoric and Communication: Black Rhetoric (5)
ENG 442 Regional Literature in English: Sub-Saharan Africa (5)
ENG 499 Black Women Writers (VAR)
ENG 506 Major American Literary Figures: Wright, Ellison, Baldwin, Brooks, Hughes (5)
ENG 545 Literary Movements: The Harlem Renaissance (5)

History
HIS 360-361 African History (5-5)
HIS 395-396 Regional and National History: Africa (5-5)
HIS 435-439 Racial and Ethnic History (5-5)
HIS 455 Individuals and History: Black Autobiographies in the U.S. (5)

*NOTE: The History Department has structured some of its catalog listings to be very general; most of the offerings are topical or thematic courses, for example, Social History 410-415, Intellectual History 415-419, Cultural History 420-424, etc. Aspects of the Black or African experience will be taught under these headings. See quarterly course listing from the Registrar's Office or the History Department's quarterly course lists.

Music
MUS 307 Evolution of Jazz (5)

Political Science
POS 338 Race and Politics in the Caribbean (5)
POS 404 Politics of the Third World (5)
POS 463 Ethnic Politics (5)

Psychology
PSY 321 Psychology of Racism (5)
PSY 482 Attitude and Ethnicity (5)
PSY 530 Culture and Childhood (5)

Sociology
SOC 471 Minorities (Race and Ethnic Relations) (5)
SOC 476 Sociology of the Underprivileged Societies (5)
SOC 496 Social Conflict in Multi-Ethnic Societies (5)

Theatre
THE 339 Black Theatre Techniques (5)
THE 555 Development of Black Theatre in America (5)

## CARIBBEAN STUDIES

*Director:* Ken I. Boodhoo, Political Science

*Coordinating Committee:* J. Bender, International Relations, R. Dwyer, English, B. Levine, Sociology/Anthropology, F. Maurrasse, Physical Sciences, R. Moncarz, Economics, M. Vizcaino, Philosophy & Religion

Florida International University offers a Caribbean Studies Program with two tracks leading to the award of two different Certificates acknowledging that a student has demonstrated competence in course work pertaining to the study of the Caribbean. These Certificates are designed to meet the needs of those who have a general interest in Caribbean and Circum-Caribbean affairs, as well as those for whom work in Caribbean Studies would serve to assist in career planning or advancement.

*Academic Certificate in Caribbean Studies:*

This Certificate is awarded with the bachelor's degree, or upon completion of Certificate requirements to a student already possessing a bachelor's degree.

A student can acquire the Academic Certificate by fulfilling the following requirements:

1. The successful completion of at least six courses (30 quarter hours) in Caribbean or Caribbean-related courses which are outlined below.
2. Courses must be selected from at least two different departments. The students should consult with departmental advisors in selecting courses.
3. With the advice of the Coordinating Committee, the student is encouraged to attain some degree of proficiency in a Caribbean language other than his native tongue.
4. A maximum of 5 credits of relevant language courses will be accepted.
5. A maximum of 10 credits of relevant independent study courses will be accepted. Such independent study will require the permission and participation of one of the members of the Coordinating Committee.
6. Field work is encouraged.

In addition, all of the requirements normal for obtaining the bachelor's degree in the College of Arts and Sciences, or in one of the professional schools, must be met including majors and minors appropriate to that degree.

A Coordinating Committee representing separate fields of knowledge, consisting of faculty engaged in the teaching of one or more courses in Caribbean Studies, will award the Certificate and serve in an advisory capacity to students.

*Professional Certificate in Caribbean Studies:*

The Professional Certificate is not associated with the bachelor's degree. It is awarded to a student upon completion of the following requirements:

All requirements for the award of the Academic Certificate are applicable except that

1. A minimum of 25 credits must be completed.
2. It is recommended that courses be taken from at least two different departments.

The University offers the following courses from which the student who is participating in the Program can select:

Anthropology
- ANT 420 Cultures of the Caribbean
- ANT 429 Area Studies: Mayan Civilization

Earth Sciences
- EAS 302 Caribbean Geology
- EAS 495 Caribbean Earth Sciences Seminar

Economics
- ECO 316 Economics of Central America
- ECO 403 The Economic Development of Cuba — Past and Present
- ECO 408 Economic Caribbean Integration
- ECO 409 Economics of the Caribbean
- ECO 410 Introduction to Economic Development
- ECO 510 Economic Problems of Emerging Nations

English
- ENG 440-445 Regional Literature in English

History
- HIS 385 Caribbean I
- HIS 386 Caribbean II: Modern Caribbean
- HIS 427 Comparative New World Slavery

International Relations
- INR 344 International Relations of the Caribbean
- INR 356 Tourism and International Affairs
- INR 453 Ethnicity and Nationality: World Patterns and Problems
- INR 461 International Relations of the Third World
- INR 467 Alternative Tourism Perspective

Philosophy and Religion
- PHI 318 Latin American Philosophies
- REL 426 Contemporary Latin American Religious Thought
- PHR 495 Cuban Migration to the U.S.

Political Science
- POS 307 Government and Politics of the Caribbean
- POS 316 Government and Politics of Central America
- POS 338 Race and Politics in the Caribbean
- POS 403 Cuban Politics
- POS 409 Topics in Caribbean Politics
- POS 429 Conflict and Cooperation in the Caribbean
- POS 559 The Multinational Corporation and Caribbean Development

Sociology
- SOC 436 Latin American and Caribbean Social Structures
- SOC 481 Comparative Sociology
- SOC 496 Social Conflict in Multi-Ethnic Societies

Language Instruction Program Courses
- SPA 301-303 Beginning Language Instruction, Intermediate Language Instruction I & II
- FRE 301-303 Beginning Language Instruction, Intermediate Language Instruction I & II

# CONSUMER AFFAIRS

*Director:* Milton L. Blum (Psychology)

*Coordinating Committee:* Myrna Crabtree (Home Economics), Samuel Shapiro (Mathematical Sciences), Ronald Tikofsky (Psychology)

With the collaboration of all the academic units and the approval of the Vice President for Academic Affairs, the Consumer Affairs Institute administers two interdisciplinary certificates sanctioned by the College of Arts and Sciences of Florida International University.

The increasing number of issues and conflicts involving consumers, business, government, and labor demand study and research so that more appropriate resolutions can be achieved. The two Certificate Programs in consumer affairs are intended to provide a sound educational base for those dealing with consumer affairs matters — be they buyers or sellers. The courses leading to the Certificate can serve those pursuing careers in consumer affairs, and provide personal benefit to individuals in their roles as consumers.

The Certificate Program is intended to provide business, government, industry, and labor with a resource for educating selected personnel in a broad range of subject matter related to consumer affairs.

An *Academic Certificate* in Consumer Affairs will be awarded to persons earning a bachelor's or master's degree if they complete satisfactorily thirty credits from the courses listed in the Certificate requirements.

A *Professional Certificate* in Consumer Affairs will be awarded upon satisfactory completion of twenty-five credits from the courses listed in the Certificate requirements. Completed courses are recorded on a university transcript. These courses may be taken upon enrollment as a Special Student and with the advice of the Certificate Program Director. Special Student enrollment and course registration can be completed simultaneously at the time of registration. Students can be admitted to the Program at the beginning of each quarter.

*REQUIRED COURSES:* For both the Academic and Professional Certificates twenty (20) credits are to be chosen from the following courses.

ECO 305 CONSUMER ECONOMICS (5 credits) Effects of public policy on family incomes and expenditure patterns. Consumer behavior, advertising and other influences affecting demand.

PSY 452 CONSUMER PSYCHOLOGY (5) Factors that cause satisfaction and dissatisfaction in buying and selling transactions and their environmental effects.

HMF 306 CONSUMER RESOURCES MANAGEMENT (3) Application of modern management principles to improve individual and family spending decisions.

HRM 312 IMPROVING YOUR EFFECTIVENESS AS A CONSUMER (3) Study of time, information, and money as resources to be managed for increasing consumer effectiveness.

MAR 410 INTRODUCTION TO CONSUMER BEHAVIOR (5) The consumer as the basis for development of marketing programs by business organizations.

PSY 453 SEMINAR AND FIELD WORK IN CONSUMER PSYCHOLOGY (7) Individual or team research study of consumer affairs topics of interest in South Florida. Reducing or solving current problems is of particular interest.

HSM 481 CONSUMER HEALTH AND SAFETY EDUCATION (5) Problems and products influencing consumer health services. Study of solutions to prevent and correct fraud.

POS 439 ENVIRONMENTAL POLITICS AND POLICY (5) Steps in the environmental policy-making process whereby private preferences are transformed into public policy.

EVR 301 ENVIRONMENTAL SCIENCE I (5) Fundamental principles of chemistry, physics, and biology are related to environmental awareness. Particular attention to air and water pollution.

EVR 302 ENVIRONMENTAL SCIENCE II (5) Continuation of EVR 301. Particular attention to energy, agricultural, and food problems, food additives, and population.

PHI 420 ETHICAL ISSUES IN BUSINESS (5) Ethical dimensions of current problems and issues facing the business manager or worker.

DIN 305 FOOD AND THE CONSUMER (5) Survey of nutrition information relating to problems of today's consumers.

ITE 422 HUMAN FACTORS ENGINEERING (5) Human performance and capacity are considered as they interact with jobs and objects in the work environment.

*ELECTIVE COURSES:* For a Professional Certificate, five (5) credits are to be chosen from the following courses. For an Academic Certificate, ten (10) credits are to be chosen from the following courses.

HSM 483 PEOPLE, POWER AND HEALTH (5) Service organizations' policies, management, finances, and operating philosophy are examined. Problems of organization, evaluation, and change are considered.

HMF 406 MANAGEMENT OF PERSONAL AND FAMILY RESOURCES (3) Application of management principles to the human and material resource problems related to individual and family living.

DIN 301 NUTRITION AND CULTURE (4) Nutrients and their interrelationship to the food habits and the needs of various populations.

# JEWISH STUDIES

*Director:* Howard Rock (History)

*Coordinating Committee:* Richard Konkel (Philosophy and Religion), Chuck Elkins (English), Barry Levine (Sociology), Brian Peterson (History), Robert Shostak (School of Education), Ron Tikofsky (Psychology), Joel Gottlieb (Political Science), Rabbi Jay Miller (Campus Ministry), Herb Lerner (Business), Steve Fain (Education).

The University provides a Certificate acknowledging that a student has demonstrated competence in course work pertaining to Jewish Studies. This certificate is designed to meet the needs of those who have a general interest in Jewish and Middle Eastern affairs, as well as those for whom work in Jewish Studies would serve to assist in career planning or advancement; for example, students who plan a career in Jewish communal service.

A student can acquire a Certificate in Jewish Studies by fulfilling the following requirements:

1) The successful completion of at least six courses (30 quarter hours) in Jewish or Middle Eastern-related courses which are listed below.
2) Courses must be selected from at least three different departments. The students must be advised by a member of the coordinating committee.
3) Students are strongly encouraged to attain at least a minimum of proficiency in either Hebrew or (if offered) Yiddish.
4) A Quarter in Israel Program is being planned. If implemented, it will be incorporated into the Certificate program.
5) A Jewish Studies Internship will be available and will involve placing students with Jewish communal agencies and educational institutions. The internship must be done with the participation of a member of the coordinating committee.
6) Independent Study may be taken towards the Certificate, but only to a maximum of ten credits. Independent study requires the participation and permission of one of the members of the coordinating committee.

In addition, all of the requirements normal for obtaining the bachelor's degree in the College of Arts and Sciences, or in one of the professional schools, must be met including majors and minors appropriate to that degree.

A coordinating committee representing separate fields of knowledge, consisting of faculty engaged in the teaching of one or more courses in Jewish Studies, will award the Certificate and serve in an advisory capacity to students.

The University offers the following courses from which the student who is desirous of earning the Certificate can select.

English

ENG 300 Themes in Literature: The American Jewish Novel (5)

History

HIS 304 Ancient Near East (5)
HIS 420 Jewish Strategies for Survival (5)
HIS 471 Jewish History: From the Ancient Hebrews Until Today (5)

Modern Languages

HEB 311 Beginning Intensive Hebrew (5)
HEB 312 Intermediate Intensive Hebrew I (5)
HEB 313 Intermediate Intensive Hebrew II (5)
HEB 314 Advanced Intensive Hebrew (5)

Philosophy and Religion

REL 310 Biblical Writings and Thought (5)
REL 312 The Prophets (5)
REL 323 Judaism (5)
REL 340 Judaic Prayer (5)

Political Science

POS 349 Government and Politics of Israel (5)

International Relations

INR 333 International Relations of the Middle East (5)
INR 373 Population and Geography of the Middle East (5)

# LATIN AMERICAN STUDIES

*Director:* Jose M. Aybar (Political Sciences)

*Coordinating Committee:* Mario Vizcaino (Philosophy and Religion), Robert Farrell (Education), A. Maingot (International Affairs), Raul Moncarz (Economics), Lamar Ross (Anthropology), R. R. Sanchez (Modern Languages)

The University does not offer an undergraduate degree in Latin American Studies, but it does provide a Certificate acknowledging that a student has demonstrated competence in course work pertaining to the study of Latin America.

A student can acquire a Certificate in Latin American Studies by fulfilling the following requirements:

1. The completion of eight courses (40 quarter hours) in Latin American courses. (See courses below).
2. Two courses (10 quarter hours) must be spent in fulfilling language requirements, either Spanish or Portuguese.
3. Course must be selected from at least three departments. The students should consult the departmental advisors in selecting courses.
4. All students contemplating entering the Certificate Program in Latin American Studies must consult with the director for acceptance into the program.
5. Fieldwork is encouraged. Plans for fieldwork should be discussed with the coordinator.
6. *Requirement for completion.* All students in the Certificate Program for Latin American Studies will submit an extensive research paper to the director, coordinator and departmental advisors. This should be done through independent study. Credit will accrue toward the Certificate.

In addition, all of the requirements normal for obtaining the bachelors degree in the College of Arts and Sciences or in one of the professional schools, must be met including majors and minors appropriate to that degree.

A coordinating committee representing different fields of knowledge, consisting of faculty engaged in the teaching of one or more courses in Latin American Studies, will award the Certificate and serve in an advisory capacity to students.

A certificate in Latin American Studies with honors will be granted those students fulfilling the following: A average and an oral examination given by one of the coordinators and three faculty members.

The University offers the courses below, from which a student may select.

*Note:* courses marked with an asterisk (*) require the permission of the Director for enrollment.

Anthropology

ANT 327 Peasant Cultures
*ANT 420 Cultures of the Caribbean (5)
ANT 421 Latin America (5)
*ANT 422 Cuban Culture and the Revolution (5)

Economics

ECO 316 Economics of Central America (5)
*ECO 403 Economic Development of Cuba — Past and Present (5)
ECO 437 The Latin American Economics (5)
ECO 455 La Economia Latinoamericana (5)

History

HIS 334 Modern Latin American History (5)
HIS 385 Regional and National: Latin America (5)
**HIS 410 Topics in Intellectual History (5)
**HIS 415 Topics in Social History (5)
**HIS 420 Topics in Cultural History (5)
**HIS 425 Topics in Economic History (5)
** Check the catalog for courses, though not specifically titled or referring to Latin America, whose content may be Latin American literature or Latin American civilization.

Modern Languages

SPA 301-303 Language Instruction (5)
SPA 311-314 Intensive Language (5)
POR 311-314 Intensive Language (5)
POR 301-303 Language Instruction (5)
POR 460 Civilization II — Brazil (5)

Political Science

POS 304 Government and Politics of South America (5)
POS 316 Government and Politics of Central America (5)
POS 326 Theories of Latin American Politics (5)
*POS 403 Cuban Politics
POS 437 Political and Social Change in Latin America (5)

Sociology

SOC 436 Latin American and Caribbean Social Structure (5)

Philosophy and Religion

PHI 318 Latin American Philosophies (5)
REL 426 Contemporary Latin American Religious Thought (5)

*(Continued on page 104)*

Education

EDU 514 Latin American Education (5)
EDU 515 Educational Systems in Latin America (5)

International Relations

INR 362 Population and Geography of Latin America (5)

# SCHOOL OF BUSINESS AND ORGANIZATIONAL SCIENCES

The School of Business and Organizational Sciences offers academic programs leading to the undergraduate degree of *Bachelor of Business Administration* and *Bachelor of Public Administration,* and the graduate degrees of *Master of Business Administration* and *Master of Science in Management.* These programs are designed to help prepare the student for careers in Business, Public Administration, and other areas of management.

Programs of the School of Business and Organizational Sciences are based on a background of courses in the arts and sciences, followed by a foundation of management policies, institutions, and operations, including study of basic management tools of analysis and decision-making. Further study in the functional areas of enterprise leads to a thorough preparation in a selected field of specialization.

The School is organized into three divisions (Management, Finance/Accounting, Policy/Marketing/Environment) and one program (Public Administration). There is a central undergraduate advising unit (DM 363) and a graduate coordinator (DM 362B). These advisors are available to provide detailed information about programs offered by the School. Their phone number is 552-2781.



## PROGRAMS OF STUDY

Every student must have a program of study completed by the end of his or her first quarter of attendance. A completed program of study is one that has been filled out and signed by the student, his or her counselor and the appropriate division chairperson. If such a program of study is not completed at least three (3) quarters before a student is expected to graduate, the student will not be permitted to register for further classes. Entering students should immediately call (305) 552-2781 for a counseling appointment.

## UNDERGRADUATE STUDY

A student entering into a bachelors program of the School is required to have completed the *Associate of Arts* degree or its equivalent, and is encouraged to bring with him or her some knowledge of accounting, mathematics, computer programming, and economics. The broad liberal arts exposure inherent in the *Associate of Arts* degree enables a student to complete the *Bachelor of Business Administration* requirements in the equivalent of two years and to take most of the professional work with Florida International's School of Business and Organizational Sciences. This professional work includes: (1) certain required courses, each of which is designed to introduce the student to a common body of knowledge, including quantitative analysis, finance and control, administrative theory and practices, the social and legal environment of business, and marketing and distribution; (2) courses required for the student's major; and, (3) elective courses.

### ENTRANCE REQUIREMENTS

The student entering an undergraduate program of the School of Business and Organizational Sciences is required to meet the following three standards:

1) 90 quarter hours (60 semester) completed, and
2) grade point average of 2.0 or above, and
3) satisfactorily meet general University requirements for admission, including, in this case, the general education requirements. The general education requirements are:
   English composition (9), humanities (9), social science (9), natural science (9), mathematics (4), electives in one of above areas (14).

The basic program in the School of Business and Organizational Sciences to obtain a *BBA* degree is 90 quarter hours. Generally, the student completing computer proficiency, and general education requirement deficiencies at Florida International will add these credits to his or her basic 90 quarter hour program.

## UPPER DIVISION TRANSFER CREDITS

Previous credit is considered acceptable for transfer toward upper level academic study in the School if the credit was earned at an accredited institution, and was designated as junior-senior level credit at a four year or upper level institution, or is validated by some acceptable measure to verify its equivalence.

## CHANGE OF MAJOR

Any student attempting to change to a new or revised major within the School of Business and Organizational Sciences must meet the requirements that exist at the time of the change.

## RESIDENCY REQUIREMENTS

A student must complete his or her last 45 quarter hours of course work at Florida International to qualify for the BBA degree from the School.

## CREDIT-BY-EXAMINATION

A student registered for a course in the School may, at the discretion of the instructor and after presenting sufficient justification, attempt credit by examination. Upon successful completion of the special examination given by the course instructor — preferably during the first week of classes to allow registration for another course that academic quarter — a grade of EM will be noted on the course grade roll at the end of the quarter, if the student, in the opinion of the professor, passes the special examination.

## COURSE SELECTION AND CLASS LOADS

Generally, a junior level student is expected to concentrate on the 45 quarter hours of core courses (and pre-core courses, if needed). Courses at the 400 and 500 levels are normally taken during the senior year, and the student must have the necessary background and/or training before enrolling.

The normal class load each quarter for an undergraduate student is:

| | *Quarter Hours** |
|---|---|
| Full-time attendance | 15 |
| Working part-time | 10 |
| Working full-time | 5 |

*Unusual circumstances combined with high scholarship may warrant an exception which must be approved by the Dean.

## GRADUATION PROCEDURES

1. During the first year in the program, undergraduate and graduate students develop and sign with their faculty advisor and dean, advance standing forms and programs of study; this program of study becomes the basic contract between the School and student and is used in determining when a student is eligible for a degree.
2. Approximately five months prior to the expected graduation date, the student files, with the Office of Registration and Records, an application for graduation.
3. The Dean's Office, having received this application from the Office of Registration and Records, has the appropriate faculty advisor review the student's record in order to determine that he has, or is in the process of, successfully fulfilling the courses required for graduation as listed in the program of study.

4. If the student's progress is deemed acceptable, the faculty advisor, division chairman, and dean certify the application for graduation, contingent upon completion of the course work which the student is registered for in his final quarter.
5. The Dean's Office should receive copies of all programs of study after all signatures have been obtained.

## UNDERGRADUATE MAJORS

Major programs leading to the bachelors degrees are offered in accounting, finance, insurance, international management, management, marketing, personnel management, public administration, real estate, transportation, urban and regional affairs, and management information systems.

### UNDERGRADUATE PROGRAM REQUIREMENTS

LOWER DIVISION PREPARATION:

The following course requirements, in addition to the other requirements for the *Associate of Arts* degree, should be a part of the 90 quarter hours (60 semester hours) of lower division coursework completed in order to enter these upper division majors.

*Required Courses:* 6 semester hours of accounting; 6 semester hours of economics; 3 semester hours of college algebra; 3 semester hours of statistics; 3 semester hours of computer programming.*

*Computer Programming Proficiency Requirement: The rapidly increasing need of the professional administrator for exposure to computer technology and terminology is the rationale for the Computer Programming Proficiency Requirement of the School. The growth and reliance on data processing techniques by business and government demand that fundamental experience in this area be achieved. Therefore, prior to enrollment in BUA 306 — Introduction to Information Systems, each student must demonstrate computer programming proficiency. This requirement may be completed in *any* of the following ways:

- Successful completion of a computer programming course at the lower division.
- Successful completion of MAS 311 — Introduction to Computers (non accounting majors) or MAS 319 — Introduction to Cobol Programming (accounting majors), at Florida International University.
- Successful completion of short, intensive course, offered during quarter breaks.
- Self-study, or work experience. An examination is offered on a regular basis for students selecting this alternative.

Further details may be obtained from the Advisement Office of the School.

UPPER DIVISION PROGRAM:

| *Core Courses Required for Business Administration Students:*[2] | *Quarter Hours* **50-65** |
|---|---|
| ACC/BUA-300 Accounting for Decisions[1] | 5 |
| ECO-301/BUA 310 Economics, Man & Society[1] | 5 |
| MAS/BUA 304 Quantitative Methods for Administration[1] | 5 |
| BUA 301 Financial Management | 5 |
| BUA 302 Operations Management Policy | 5 |
| BUA 303 Principles of Marketing | 5 |
| BUA 305 Quantitative Methods for Administration | 5 |
| BUA 306[3] Introduction to Information Systems | 5 |
| BUA 307[3] Accounting for Planning and Control | 5 |
| BUA 309 Organization and Management | 5 |
| BUA 312 Business and Its Environment | 5 |
| ECO/BUA 311 Applied Macroeconomics | 5 |
| BUA 496 Policy Analysis | 5 |

(Continued on page 107)

[1]MAS 304, ECO 301 and ACC 300 will be waived if the student received an A, B, C in the appropriate lower division courses. (Please see a counselor to determine whether these courses should or should not be included in your academic program. If a student has successfully completed comparable courses at the lower level, upper division credit will not be given for MAS 304, ECO 301 and ACC 300). If waived, these courses must be replaced by electives.

[2]See pages 110-112 for the public administration core courses and program.

[3]See pages 107-109 for accounting core courses and programs: BUA 306 and 307 must not be taken by accounting majors.

| | |
|---|---|
| *Major Required Courses:* at the 400-500 level only | 25 |
| *Electives:* | 0-15 |
| | 90 |

## BUSINESS CORE COURSE PREREQUISITES

ACC 300* ACCOUNTING FOR DECISIONS — This course will be waived if student received a "C" grade or better in Principles of Accounting sequence (ACC 107 and 108 or ACC 100, 101 and 102 at Miami-Dade).

ECO 301* PRINCIPLES OF ECONOMICS — This course will be waived if student received a "C" grade or better in Principles of Economics sequence. (ECO 210 and 211 at Miami-Dade).

MAS 304* QUANTITATIVE METHODS FOR ADMINISTRATION I — This course will be waived if students received a "C" grade or better in a comparable level statistics course (BST 201 or MAT 251 at Miami-Dade).

BUA 301* FINANCIAL MANAGEMENT — ACC 300 *or* its equivalent (see above for ACC 300).

BUA 302 OPERATIONS MANAGEMENT — MAS 304 *or* its equivalent (see above for MAS 304), and BUA 305.

BUA 303 MARKETING MANAGEMENT — None.

BUA 305 QUANTITATIVE METHODS FOR ADMINISTRATION II — MAS 304 or its equivalent (see above for MAS 304).

BUA 306 MANAGEMENT INFORMATION SYSTEMS — BUA 309, BUA 307, BUA 305, BUA 302, and computer programming proficiency requirement (BDP 167 at Miami-Dade, MAS 311 at FIU for nonaccounting majors, MAS 319 at FIU for accounting majors).

BUA 307 ACCOUNTING FOR PLANNING AND CONTROL — ACC 300 *or* its equivalent (see above for ACC 300).

BUA 309 ORGANIZATION AND MANAGEMENT — None.

BUA 312 BUSINESS AND ITS ENVIRONMENT — ECO 301 *or* its equivalent (see above for ECO 301).

ECO 311 APPLIED MACROECONOMICS — ECO 301 *or* its equivalent (see above for ECO 301).

BUA 496 BUSINESS POLICY — Course should be taken in student's last academic quarter before graduation.



## RECOMMENDED COURSE SEQUENCES FOR UNDERGRADUATE PROGRAMS

### PROFESSIONAL ACCOUNTING

The bachelor degree program in Accounting consists of three parts: the Core (40 quarter-hours), the Concentration in Accounting (35 quarter-hours), and Electives (15 quarter-hours, which must be selected from among the courses listed below or be approved by the chairperson of the Finance and Accounting Division).

*Courses for an emphasis in Managerial Accounting are:*

*Required Courses:* ACC 401, ACC 402, ACC 403, ACC 405, ACC 406, ACC 408, ACC 425.

*Elective Courses:* ACC 407, ACC 412, ACC 413, ACC 414, ACC 495, COE 325, COE 425, ECO 307, ECO 417, ECO 432, ENG 311, ENG 312, FIN (400 LEVEL ELECTIVE), LAW 407, MAN 550, MAN 551, MAN 552.

*Courses for an emphasis in Financial and Public Accounting are:*

*Required Courses:* ACC 401, ACC 402, ACC 403, ACC 405, ACC 406, ACC 407, ACC 408.

*Elective Courses:* ACC 412, ACC 413, ACC 414, ACC 417, ACC 424, ACC 425, ACC 496, ACC 502, ACC 506, ACC 517, COE 325, COE 425, ECO 307, ECO 417, ECO 432, ENG 311, ENG 312, FIN (400 LEVEL ELECTIVE), LAW 407.

### FLORIDA CPA REQUIREMENT

Completion of a *Bachelor of Business Administration* with emphasis in public accounting is accepted by the Florida State Board of Accountancy as fulfilling requirements to sit for the Certified Public Accountant Examination.

The law relating to the practice of public accounting (Chapter 473, Florida Statutes 1969) provides in Rule 21A-8.02 — Major in Accounting that:

> For purposes of Section 473.08(4)(b), F.S., a major in accounting is defined as an educational program at accredited colleges or universities which includes at least 18 semester hours or 27 quarter hours, or the equivalent, in accounting education above the elementary level and 27 semester hours or 40 quarter hours, or the equivalent, in general business education. For this purpose, accounting hours above the minimum requirement may be substituted for general business hours.

### ACADEMIC STANDARDS — ACCOUNTING

The upper-division undergraduate accounting program is designed to introduce the student to that common body of knowledge of business and accounting needed for the development and growth of the professional accountant in public accounting, industry, education, and government. The student is urged to acquire a broad, general education in the arts, the humanities and the sciences at the lower-division level for his (or her) own personal development and growth.

## MODEL SCHEDULE — ACCOUNTING

The following is a model schedule with several options that must be followed by the typical full-time student who (1) has completed all of the freshman-sophomore requirements, and (2) wishes to complete the undergraduate accounting program with emphasis in public accounting. Deviations from this schedule must be approved by the chairperson of the Finance and Accounting Division. (The student possessing a non-business baccalaureate degree should consult a School of Business and Organizational Sciences academic counselor for alternative programs that meet the Florida State Board of Accountancy requirements.)

*Quarter 1*
BUA 301
BUA/MAS 305
BUA 312

*Note: Pre-core deficiencies must be completed in Quarter 1.*

*Quarter 2*
ACC 401
BUA 302
ECO 311

*Quarter 3*
ACC 402
BUA 303
BUA 309

*Quarter 4*
ACC 405
ACC 406
BUA 312
*Elective:* ECO 307, ECO 417, ECO 432, ENG 312, A 400 level finance course or LAW 407.

*Quarter 5*
ACC 407
ACC 403
*Electives:* ACC 412, ACC 413, ACC 414, ACC 424, ACC 425, or a 400 level finance course.

*Quarter 6*
BUA 496
ACC 408
*Elective:* LAW 407; ACC 412, ACC 413, ACC 414, ACC 424, or ACC 425.

## FINANCE

The bachelor degree program in Finance consists of (1) the core courses (45 quarter hours), an area of concentration in Finance (25 quarter hours), and electives (20 quarter hours).

The areas of concentration in Finance are as follows:

1. *Managerial Finance* — FIN 405 (Policies for Financial Management) and FIN 406 (Topics in Finance)
2. *Financial Institutions and Markets* — FIN 415 (Nonbank Financial Intermediaries and Markets) and FIN 416 (Commercial Bank Management)
3. *Investments* — FIN 425 (Security Analysis) and FIN 426 (Topics in Investment Analysis)

The Finance concentration consists of five courses selected from the above three areas. The student majoring in Finance is urged to elect courses in micro-and macro-economics. The prerequisite for 400 and 500 level finance courses is BUA 301.

*Suggested Program of Study*

*Quarter 1*
BUA/MAS 305
BUA 307
BUA 309

*Quarter 2*
BUA 301
BUA 302
ECO 311

*Quarter 3*
BUA 303
BUA 306
BUA 312

*Quarter 4*
Three electives

*Quarter 5*
Three electives

*Quarter 6*
Three electives: BUA 496 strongly recommended or required (see advisor.)

## INSURANCE

An insurance major is offered through the Division of Policy, Marketing, and Environment. An Insurance major is required to take 25 quarter hours of insurance courses at the 400 level. For most students majoring in insurance the following five courses are recommended:

INS 405 — Principles of Insurance (5)
INS 410 — Casualty Insurance I (5)
INS 411 — Casualty Insurance II (5)
INS 412 — Property Insurance I (5)
INS 413 — Property Insurance II (5)

These five insurance courses have been approved by the State of Florida Insurance Commissioner's office to fulfill the eduational requirements for taking the 2-20 license examination.

A student may, however, after consultation with his or her major advisor, choose to take other courses such as INS 407 — Life Insurance, INS 418 — Management of Insurance Enterprise, or other insurance offerings. Students may also be eligible for the certificate for professional insurance accomplishment.

## MANAGEMENT

The Division of Management offers degree programs of study at the bachelors level in Organizational Theory, Personnel Management, Behavioral Science, Management Science, Management Information Systems, and Health Care Management. (The undergraduate program in Health Management is jointly offered by the School of Health and Social Services. For admission requirements, consult the Department of Health Sciences, School of Health and Social Services). The student is given wide latitude either to specialize in one particular area, or to select from courses on a more general level of professional education. The management major requires 20 quarter hours of management courses at the 400 or 500 level. BUA 408, Managerial Decision Making, is required for all students within the 20 hour requirement with the exception of those selecting the personnel management track.

Alternative suggestions for course selections in various tracks follow the suggested, general program of study below.

*Suggested Program of Study*

*Quarter 1*
BUA/MAS 305
BUA 307
BUA 309

*Quarter 2*
BUA 301
BUA 302
BUA 303

*Quarter 3*
BUA 306
BUA 312
BUA 408

*Quarter 4*
ECO 311
One course with MAN prefix
One elective course*

*Quarter 5*
Two courses with MAN prefix
One elective*

*Quarter 6*
BUA 496 — Policy Analysis
Two electives*

*Elective courses may be taken in any academic area. (Recommended departments outside SBOS are Economics, Mathematical Sciences, and Psychology).

*Alternative Courses for Management Students in Specific Subject Areas*

1. *Personnel Management: (Select 4 of 5)*
   MAN 457 Personnel Management (5)
   MAN 454 Industrial Relations (5)
   MAN 455 Labor Management and Collective Bargaining
   MAN 463 Personnel Recruitment and Selection (5)
   MAN 464 Wage and Salary Administration (5)

2. *Management Information Systems:*
   BUA 408 Managerial Decision-Making (5)
   MAN 422 Information Systems Development (5)
   MAN 428 Production Information Systems (5)
   MAN 420 Simulation of Management Systems (5)

3. *Organizational Behavior*
   BUA 408 Managerial Decision Making
   BUA 453 Organization Theory
   BUA 456 Behavicral Science in Management
   BUA 461 Intergroup Relations in Organizations

4. *General Management*
   BUA 408 Managerial Decision-Making
   MAN 451 International Management
   MAN 453 Organization Theory
   MAN 458 Small Business Management

5. *Flexible Option*
   BUA 408 Managerial Decision-Making
   Any three (3) other MAN courses

## MARKETING

The bachelor degree program in Marketing requires 25 quarter hours of marketing courses beyond the core course (BUA 303 Principles of Marketing). Of these 25 credit hours, 15 hours consist of the following required courses:

| | |
|---|---|
| MAR 404 Marketing Management** | (5) |
| MAR 410 Consumer Behavior | (5) |
| MAR 411 Marketing Research | (5) |

**Should be taken toward the end of student's program.

The remaining 10 credit hours may be elected by the student with his or her advisor from other marketing courses available.

## PUBLIC ADMINISTRATION

The Bachelor of Public Administration degree program is offered for students interested in entering public service upon completion of their undergraduate work,

or for those who wish to continue study in public management on a graduate level toward a master's degree. The program is primarily designed and geared toward those who want to develop their knowledge and skills for service in local government agencies.

The undergraduate Public Administration program is available to students with two years of undergraduate work, culminated in the Associate of Arts degree or its equivalent. Students from all areas of study are encouraged to apply to the program. There are three requirements: (1) 90 quarter-hours (60 semester-hours) completed (2) grade point average of 2.0 or above (3) University general education requirements of English composition (9), humanities (9), social science (9), natural science (9), mathematics (4), and electives in one of above areas (14).

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Required Core Courses:* | | **45** |
| PAD 305 Administrative Statistics and Data Systems | 5 | |
| *or* | | |
| BUA 306 Introduction to Information Systems | 5 | |
| BUA 309 Organization and Management | 5 | |
| PAD 312 Public Policy and Its Administration | 5 | |
| PAD 320 Personal Growth and Administrative Development | 5 | |
| PAD 400 Concepts and Issues in Public Administration | 5 | |
| PAD 403 Public Personnel Administration | 5 | |
| PAD 405 Government and Administration of Metropolitan Areas | 5 | |
| PAD 410 Public Values, Ethics and Morality in Changing Environment | 5 | |
| PAD 428 Budgets and the Administrative Process | 5 | |
| *Public Administration Electives:* | | **25** |
| PAD 301 Financing Public Organizations | 5 | |
| PAD 310 Organizational Group Processes | 5 | |
| PAD 321 Administrators and the Legislative Process | 5 | |
| PAD 325 International Comparative Administration | 5 | |
| PAD 401 Administrative Interaction in the Public Sector | 5 | |
| PAD 402 Politics of Administrative Organization | 5 | |
| PAD 404 Organization and Administrative Theory | 5 | |
| PAD 406 Administrative Law | 5 | |
| PAD 407 Administrative Leadership and Behavior | 5 | |
| PAD 408 Public Choice | 5 | |
| PAD 409 Administration of Personnel Resources | 5 | |
| *General Electives:* | | **20** |
| These may be taken from among the numerous undergraduate course offerings in political science, economics, sociology, psychology, management, education, etc. | | |
| | | **90** |

*Suggested Program of Study*

| *Quarter 1* | *Quarter 3* | *Quarter 5* |
|---|---|---|
| PAD 400 | BUA 309 | PAD 305 or BUA 306 |
| PAD 410 | PAD 403 | One PAD elective |
| One PAD elective | One PAD elective | One general elective |
| *Quarter 2* | *Quarter 4* | *Quarter 6* |
| PAD 312 | PAD 320 | Three general elective |
| PAD 428 | PAD 405 | courses. |
| One PAD elective | One PAD elective | |

### REAL ESTATE

A Real Estate major at the bachelors degree level is offered through the Division of Policy, Marketing, and Environment within the School of Business and Organizational Sciences. The Real Estate major student is expected to take 25 quarter hours within the Real Estate course offerings or, with the consent of his or her advisor, in an allied field such as Urban and Regional Affairs. Under normal circumstances a Real Estate major without previous formal under-graduate work in the area will be expected to take the two introductory courses, (RES 390 — Introduction to Real Estate, and RES 391 — Legal Environment of Real Estate), along with three other 5 quarter hour courses chosen with the consent of his or her major advisor.

### TRANSPORTATION MANAGEMENT

Transportation Management is one of the bachelors degree programs offered through the Division of Policy, Marketing, and Environment. The student who wishes to major in Transportation Management is required to take 25 quarter hours of Transportation Management courses at the senior (400) level. The student is encouraged to take TRA 405 — Transportation Systems and Services and TRA 492 — Transportation Policy for 10 quarter hours of major field credit. Besides these two courses, the student is encouraged to take three courses in Transportation Management such as TRA 406 — Mass Transportation and Urban Problems, TRA 409 — Principles of Transportation Logistics, and TRA 410 — Transportation Rate Making, or a field such as Air Transportation and take TRA 441 — Air Transportation, TRA 442 — Airport Management, and TRA 443 — Air-carrier Management.



## GRADUATE STUDY

The Graduate Programs of the School of Business and Organizational Sciences offer the student advanced professional education for managerial careers in business and government. At the graduate level, the degrees of *Master of Business Administration* and *Master of Science in Management* are offered. Four certificate programs, in Management Information Systems, Personnel Administration, Real Estate, and Health Care are also offered.

Generally, graduate programs in the School of Business and Organizational Sciences are aimed at accomplishing two objectives. The first objective is to provide the student with a sound foundation in a variety of management functions such as marketing, production, accounting, finance, quantitative methods, decision-making, and behavioral science. Based upon this foundation, the second objective of the programs in the School is to provide students with a specialization and expertise in a particular area of management so as to facilitate the student's performance on his or her entry or second level job.

### ADMISSION REQUIREMENTS

To be eligible for admission to the graduate programs in the School of Business and Organizational Sciences at Florida International, the applicant must:

1. Satisfactorily meet the general University requirements for admission to graduate programs.
2. Hold a bachelors degree from a regionally accredited college or university.
3. Meet the minimum standards regarding entrance examination scores and upper-division grades as determined by the faculty:

a) Admission to the *Master of Business Administration* (MBA), and the *Master of Science in Management-Accounting, Finance, International Business,* and *Real Estate* programs, will be based upon a combination of the score on the *Graduate Management Admissions Test in Business* (GMAT) and the upper division grade-point average (GPA). Specifically, the applicant must have a combined score of at least 725 points, computed as follows:
(GPA X 100) + (GMAT score) = 725, with a minimum 450 on the GMAT.)

b) Admission to the *Master of Science in Management-Health Care* Management or the *Master of Science in Management-Public Administration* programs, will be based upon either a "B" or better upper-division grade-point average or a score of 1000 or higher on the *Graduate Record Examination* (GRE).

4. A foreign student must present a minimum score of 500 on the TOEFL or equivalent on a comparable examination. (See General Admission Requirements for Foreign Students-undergraduates and graduates, in the Admission section of the catalog.)
5. Be in good standing with previous colleges or universities attended.

## APPLICATION PROCEDURES FOR THE MASTER OF BUSINESS ADMINISTRATION AND THE MASTER OF SCIENCE IN MANAGEMENT PROGRAMS

A student planning to enroll in graduate studies in the School must complete the following steps and meet the stipulated requirements:

1. Submit a graduate application for admission to the Admissions Office of Florida International. Application forms will be mailed upon request. The admission process may require as much as two months after receipt of the application, depending upon the time involved in the receipt of transcripts and test scores.
2. Have a copy of the official transcripts of all previously earned college or university credits sent from the applicant's former institution(s) to the Admissions Office of Florida International. Copies submitted by applicants are *not* accepted for application purposes.
3. (a) The candidate applying to the MBA, MSM Accounting Finance, International Business and Real Estate Programs, must submit his or her scores on the *Graduate Management Admissions Test* (GMAT), administered nationally by the Educational Testing Service (Box 966, Princeton, New Jersey, 08540). Registration Forms will be mailed upon request.
(b) The candidate applying to the MSM Health Care and MSM Public Administration programs, must submit his or her scores on the *Graduate Record Exam* (GRE), administered nationally by the Educational Testing Service (Box 955, Princeton, New Jersey, 08540). Registration Forms will be mailed upon request.

## DEGREE REQUIREMENTS

To be eligible for a Master's degree, a student must:

1. Satisfy all university requirements for a master's degree.
2. Meet the requirements of an approved Program of Study.*
3. (a) Complete a minimum 45-60 quarter hours (depending on program) of graduate level coursework, beyond the Common Body of Knowledge,** for the Master of Science in Management programs.
(b) Complete a minimum 60 quarter hours of graduate level coursework for the Master of Business Administration.
4. Earn a minimum average of B (3.0) or the equivalent in all work completed at FIU as a graduate student.

*The student's Program of Study is developed by the student and his faculty advisor and must be approved by the division chairman and the dean of the School of Business and Organizational Sciences.

**The "Common Body of Knowledge" shall include the equivalent of one year of work comprising the following areas: (a) a background of the concepts, processes, and institutions in marketing and distribution, production, and financing functions of business enterprise; (b) a background of economic and legal environment of business enterprise along with consideration of the social and political influences of business; (c) a basic understanding of the concepts and methods of accounting, quantitative methods, and information systems; (d) a study of organization theory, interpersonal relationships, control and motivation systems, and communications; (e) a study of administrative processes under conditions of uncertainty including integrating analysis and policy determination at the overall management level.

## GRADUATION PROCEDURES

See the procedures described on page 105.

## GRADES AND CREDITS

No courses in which a grade below "C" is earned may be counted toward the MBA or MSM degrees. However, all work taken as a graduate student will be counted in computing the quality point average, including courses graded D, and any undergraduate courses taken while a graduate student.

## TRANSFER CREDIT

Beyond the Common Body of Knowledge, the student may receive permission to transfer up to a maximum of 10 quarter hours of graduate credit to his or her degree program, provided that: (1) the course(s) were taken at the graduate level at an accredited college or university, (2) grade(s) of "B" or better were earned, and (3) the course(s) were judged by the faculty advisor, division chairperson, and dean to be relevant to the student's graduate program. Credit is not transferable until the student has earned 25 quarter hours in his School of Business and Organizational Services graduate program. The credit must not have been used toward another degree.

## MAXIMUM RECOMMENDED COURSE LOADS

Full time students: ..... 10 quarter hours
Students working full or part-time ..... 5 quarter hours
Approval for exceptions must be obtained from the dean.

## SPECIAL STUDENT REGISTRATION

Only fully admitted graduate students may register for MBA courses with the exception of MBA 605 and MBA 607. The special student should be counselled by the appropriate faculty advisor before registering for any courses.

## 500-LEVEL COURSES

500-level courses are open to graduate students and seniors. Master of Science in Management students may take a maximum of three 500-level courses. All other courses in the student's program must be at the 600-level (courses which are only open to graduate students). Master of Business Administration will normally take all work at the 600-level.

## TIME LIMIT

All work applicable to the master's degree must be completed within six years immediately preceding the awarding of the degree.

## ACADEMIC WARNING, PROBATION AND DISMISSAL

*WARNING:* A student whose cumulative GPA falls below a 3.0 will be placed on *WARNING* indicating academic difficulty.

*PROBATION:* A student on *WARNING* whose cumulative GPA falls below 3.0 will be placed on *PROBATION* indicating serious academic difficulty. The College/School of the student on *PROBATION* will appropriately communicate conditions which must be met in order to continue to enroll in the program.

*DISMISSAL:* A student on *PROBATION* whose cumulative and quarterly GPA falls below 3.0 will be automatically dismissed from his/her program and the University.

## MASTER OF BUSINESS ADMINISTRATION

The objective of the *Master of Business Administration* (MBA) is to provide the student with a general background in the concepts and processes of administration. The MBA program at Florida International is aimed at developing a management generalist who has a breadth of knowledge and understanding, and who is oriented toward pragmatic problem solving. Limited specialist training is available for the student who has the necessary background.

The courses leading to the MBA degree are designed to provide a breadth of experience in the tools and concepts of business administration. The total MBA program is fixed at 60 quarter hours of MBA courses. The courses are categorized by area, with a regular MBA course and substitute(s) for each category. If a student tests-out or is counselled out of the "regular" course(s) he or she must select one of the substitutes *in the same category.* To be eligible for testing or counselling out of a "regular" course, the student should have previously completed at least three to four courses *in that functional area* at the upper division level with above-satisfactory grades. Electives may be taken from any of the 600-level offerings within the SBOS. Students without accounting or statistical background will substitute MBA 605 — Managerial/Financial Accounting and MBA 607 — Quantitative Methods in Management for their electives.

*MBA Program*

| *Area* | *Regular Course* | *Possible Substitute Courses'* |
|---|---|---|
| Economics* (Micro/Macro) | ECO 606 Managerial Economics | An elective in either Marketing or Finance. This substitute is only available to an economics major. |
| Information Systems | MBA 626 Organization Information Systems | MAN 618 Information Requirements Analysis |
| Quantitative Methods* | MBA 625 Managerial Decision-Making | MAN 630 Systems Analysis |
| Accounting** | MBA 627 Accounting for Decision-Making | MBA 613 Taxation<br>MBA 612 Auditing |
| Finance (Corporate) | MBA 635 Financial Management | FIN 655 International Finance<br>FIN 615 Financial Markets and Institutions<br>FIN 645 Financial Theory and Models<br>FIN 655 International Finance |
| Operations | MBA 637 Operations Management | MAN 630 Systems Analysis |
| Marketing | MBA 636 Marketing Management | MAR 611 International Marketing; Marketing Analysis |
| Management | MBA 617 Organizational Analysis | MAN 661 Group Processes<br>MAN 650 Labor Relations<br>MAN 671 International Management |

| | | |
|---|---|---|
| Environment | MBA 615 World Dynamics and the Organization | LAW 600 Business Law<br>MBA 616 International Business Environment |
| Policy | MBA 699 Policy Analysis | No substitutes |
| Electives | Two 600 level business administration courses (10 quarter hours) depending upon the waiver of MBA 605 and MBA 607 | |

[1]See the guidelines under program description above.

*For the student without MAS 304 and BUA 305 (college algebra and statistics) background; MBA 607 will replace *one* elective, to be taken *prior* to ECO 606 and MBA 625.

**For the student without ACC 300 and BUA 307 (financial and managerial accounting) background; MBA 605 will replace *one* elective, to be taken *prior to* MBA 627 and MBA 635.

NOTE: The first four categories — economics, information systems, quantitative methods, and accounting — must be satisfied *prior to* taking any other MBA courses. The policy course has to be scheduled for the *last quarter* of MBA study. Two electives are allowable within one program except as noted.

## MASTER OF SCIENCE IN MANAGEMENT (MSM)

The Master of Science in Management Program provides an in-depth educational experience for the student desiring greater specialization in a particular area.

Concentrations within the Master of Science in Management program are available in the following areas: Accounting, Finance, Health Care Management, International Business, Real Estate, Public Administration.

The Master of Science in Management Program is a one to two year sequence depending upon the specific program and the applicability of the student's undergraduate course work. The type and number of prerequisite courses varies by the area of concentration. Each student will be counseled concerning his individual deficiencies, if any, and how they may be met.

### MSM ACCOUNTING

The MSM Program in accounting is designed primarily for the student with an undergraduate degree in accounting. The student with a bachelor's degree in another field may be admitted to this program after mastering the equivalent of the Common Body of Knowledge in business and the necessary accounting and business law courses.

Due to varied career opportunities, the MSM Program in Accounting is divided into four subprograms and many variations are possible. The Managerial Accounting program is designed for the student who aspires to be an officer in a business corporation, a governmental unit, or a not-for-profit organization. The Public Accounting program is designed for the student who aspires to be a certified public accountant and leader in the public accounting profession. The International Accounting program is designed for the student who aspires to a professional career with an international accounting firm, a multinational corporation, an international public organization, and institutions in a developing country. The Taxation program is designed for the student who aspires to a career as a tax professional in public accounting, law, industry, education, or government.

A student who earns an MSM in Accounting and successfully passes the Certified Public Accountant Examination will receive a certificate as a certified public accountant. An explanation of the relevant Florida Statute follows.

### FLORIDA CPA REQUIREMENT

Completion of a *Bachelor of Business Administration* with emphasis in public accounting is accepted by the Florida State Board of Accountancy as fulfilling

requirements to sit for the Certified Public Accountant Examination. For the law relating to the practice of public accounting in which Major in Accounting is defined see Rule 21A-8.02 on page 108.

Ordinarily a person passing the CPA Examination must complete one year of employment in the office of a Florida practitioner or an out-of-state practitioner before receiving a certificate as a certified public accountant. However, the law relating to the practice of public accounting provides in Rule 21A-8.03 that:

> An additional one year accounting course acceptable in lieu of one year of employment is defined as a minimum of 30 semester hours or 45 quarter hours, or the equivalent, in courses which would qualify for graduate level credit at accredited colleges or universities which shall include at least 12 semester or 18 quarter hours, or the equivalent, in post-baccalaureate accounting education. For purposes of this rule, courses used to satisfy Rule 21A-8.02 may not be included in the additional one year accounting course.

Each of the four subprograms (or specializations) in the master degree program in Accounting has been designed to allow the student to specialize. Thus, the choice of a specialization pre-determines most of a student's course requirements. Each student must work with the graduate advisor in designing his (or her) own program of study in compliance with the requirements of his chosen specialization. The following is the outline of a general program of study:

*Program of Study*

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* selected from the courses below; 15 of the required hours must be at the 600 level. | | **20** |
| ACC 501 Financial Accounting | 5 | |
| ACC 502 Standards and Principles of Financial Accounting | 5 | |
| ACC 503 Advanced Financial Accounting | 5 | |
| ACC 506 Governmental and Institutional Accounting | 5 | |
| ACC 508 Accounting Information Systems | 5 | |
| ACC 510 Behavioral Accounting | 5 | |
| ACC 512 Auditing | 5 | |
| ACC 513 Accounting for Income Taxes | 5 | |
| ACC 517 Accounting Problems[1] | 5 | |
| ACC 602 Seminar in Accounting Information Systems I[1,2] | 5 | |
| ACC 603 Seminar in Accounting Information Systems II[2] | 5 | |
| ACC 606 Managerial Accounting[1,2] | 5 | |
| ACC 607 Seminar in Managerial Accounting I[1,2] | 5 | |
| ACC 608 Seminar in Managerial Accounting II[2] | 5 | |
| ACC 610 Seminar in Accounting Theory I[1,2] | 5 | |
| ACC 611 Seminar in Accounting Theory II[1] | 5 | |
| ACC 612 Studies in Auditing[1] | 5 | |
| ACC 613 Tax Planning and Research[1,3] | 5 | |
| ACC 614 Taxation of Corporations & Partnerships[3] | 5' | |
| ACC 615 Taxation of Estates and Trusts[3] | 5 | |
| ACC 616 International Accounting[1,4] | 5 | |
| ACC 620 Tax Accounting Theory and Tax Policy[3] | 5 | |
| ACC 621 Consolidated Corporate Taxation[3] | 5 | |
| ACC 622 Partnership Taxation & Tax Shelters[3] | 5 | |
| ACC 623 Tax Planning and Fiduciary Taxation[3] | 5 | |
| ACC 624 Current Developments in Taxation[3] | 5 | |
| ACC 625 Seminar in Taxation[3] | 5 | |
| ACC 626 International Taxation[3,4] | 5 | |

| | |
|---|---|
| ACC 630 Behavioral Accounting | 5 |
| ACC 631 Accounting and Quantitative Methods | 5 |
| *Masters Project (Required[5])* | |
| ACC 695 | 5 |
| *Elective:* Selected with permission of faculty advisor | 20 |
| | 45 |

[1]Designed primarily for the Public Accounting subprogram.

[2]Designed primarily for the Managerial Accounting subprogram.

[3]Designed primarily for the Taxation subprogram.

[4]Designed primarily for the International Accounting subprogram.

[5]With the approval of the graduate advisor, a student may substitute a graduate level, research-oriented accounting course for ACC 695.

## MSM FINANCE

This graduate program, leading to the degree of Master of Science in Management, offers an alternative to students who want to pursue an advanced education in business and, at the same time, wish to concentrate their training on a field of specialization. The *MSM Program in Finance* is designed to develop analytical skills and decision-making abilities in the solution of problems related to raising and using funds. Graduates will be able to demonstrate a suitable competence in handling complex financial and investment situations. Moreover, their top management view of firms and corporations will be strengthened in order to enable them to participate effectively in the other functions of business. Graduates will also have a good institutional knowledge on financial and capital markets, financial instruments, and current developments and opportunities available to investors, financial institutions, and non-financial enterprises.

*CONTENT AND STRUCTURE:* The program consists of sixty (60) quarter hours (12 courses) divided into three groups as follows:

1. Seven core courses. All participating students are required to take these courses. However, eligible students can waive these courses depending on their undergraduate education.
   (a) Three of the core courses are of the general background type. They cover the subjects of general management, economics, and quantitative methods.
   (b) Four of the core courses cover specific functions in business such as accounting and the processing of information, marketing, and finance.
2. Four specialization courses. Each student will select courses from a number of finance offerings that will be available. A concentration in a particular subject such as corporate finance, investments, financial institutions and banking, theory and models, etc., is not only possible, but encouraged. Individual faculty counseling is available to provide assistance in designing the field of specialty.
3. One elective course. Any 600-level course offered by the School of Business and Organizational Sciences can be taken to meet this requirement.

*Program of Study*

| | *Quarter Hours* |
|---|---|
| *Required Courses:* | 35 |
| ECO 600 Managerial Economics | |
| MBA 607 Quantitative Methods in Management | |
| MBA 617 Organizational Analysis | |
| MBA 626 Organizational Information Systems[1] | |
| MBA 605 Financial Accounting Analysis | |
| MBA 635 Financial Management | |
| MBA 636 Marketing Management | |

| | | |
|---|---|---|
| *Specialization Courses:* | | 20 |
| (A sample of courses that the student can select to satisfy the specialization requirement.) | | |
| FIN 605 Asset Selection Management | | |
| FIN 625 Security Analysis | | |
| FIN 615 Financial Markets and Institutions | | |
| FIN 645 Financial Theory and Models | | |
| FIN 526 Topics in Investment Analysis | | |
| FIN 616 Management of Deposit Institutions (Banking) | | |
| FIN 635 Financial Management of Governmental Organizations | | |
| FIN 655 International Finance | | |
| FIN/MAN 518 Health Care Financial and Accounting Management | | |
| FIN 545 Small Business Finance | | |
| FIN 697 Special Topics in Finance | | |
| FIN 626 Portfolio Management | | |
| FIN 606 Business Financial Structure | | |
| MBA 627 Accounting for Decision-Making | | |
| ECO 626 Money and Monetary Policy | | |
| MPA 602 Public Finance and the Budgetary Process | | |
| RES 500 Real Estate Finance | | |
| INS 600 Graduate Survey of Insurance | | 5 |
| *Elective:* | | 60 |

## MSM HEALTH CARE

The educational program in health care management is jointly offered by the School of Business and Organizational Sciences and the School of Health and Social Services. The program is designed to provide appropriate academic preparation for people elevated from service positions to managerial positions in the health care industry and who will be leaders in the delivery of health services.

*Program Prerequisites:* One course in health statistics; one course in accounting and one course in health delivery systems; one year of work experience in the health care field is preferred.

*Program of Study*

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | 20 |
| HCM 631 Public Health Policy | 5 | |
| HCM 684 Health Management | 5 | |
| HCM 681 Health Management Analysis | 5 | |
| HCM 695 Masters Project | 5 | |
| *Electives:* Five of the following courses: | | 25 |
| HCM 515 Health Planning Techniques | 5 | |
| HCM 517 Human Resource Management in Health Care Organizations | 5 | |
| HCM 680 Application of Management Science in Health Care | 5 | |
| HCM 683 Health Law Trends | 5 | |
| HCM 688 Health Finance | 5 | |
| HCM 523 Emergency Medical Services | 5 | |
| HCM 624 Seminar in Emergency Medical Services | 5 | |
| HCM 689 Medical Care Administration | 5 | |
| HCM 687 Seminar in Health Management | 5 | |
| HCM 685 Hospital Administration | 5 | |
| | | 45 |

## MSM IN INTERNATIONAL BUSINESS

The MSM in International Business is a 60 quarter-hour program designed to acquaint students with the international environment and provide basic management tools and solid preparation in one area of specialization. The first block of four core courses will give the student a conceptual framework of international business, economic development and comparative politics. They will deal with international corporations, international investment and international cooperation. The second block of four courses will give the student a general background in accounting, finance, management and marketing. Each student will then specialize in one of the major areas: Marketing, Management, Finance or Accounting, taking four additional courses in his/her chosen field. All students will be required to demonstrate competence in Quantitative Methods or will be required to take the course MBA 607.

*Curriculum*

| | *Quarter Hours* |
|---|---|
| *Core Courses:* | |
| *International Studies* | |
| MBA 615 World Dynamics and Organization | 5 |
| MBA 616 Organization and the Intra-national Environment | 5 |
| ECO 510 Economic Problems of Emerging Nations | 5 |
| *or* | |
| ECO 666 Graduate Seminar in Applied Economics | 5 |
| POS 588 Topics in Comparative Politics | 5 |
| *or* | |
| PAD 610 Development Administration | 5 |
| *General Business* | |
| MBA 605 Financial Accounting Analysis | 5 |
| MBA 617 Organizational Analysis | 5 |
| MBA 635 Financial Management | 5 |
| MBA 636 Marketing Management | 5 |
| *Specialization:* | |
| *Accounting* | |
| MBA 627 Accounting for Decision-making | 5 |
| ACC 501 Financial Accounting | 5 |
| *or* | |
| ACC 505 Topics in Managerial Accounting | 5 |
| ACC 507 International Accounting | 5 |
| *or* | |
| ACC 606 Managerial Accounting | 5 |
| ACC 693 Independent Study in Accounting | 5 |
| *Finance* | |
| FIN 615 Financial Markets | 5 |
| FIN 616 Management of Deposit Institutions | 5 |
| *or* | |
| FIN 625 Security Analysis | 5 |
| FIN 655 International Finance | 5 |
| FIN 693 Independent Study in Finance | 5 |
| *Marketing* | |
| MAR 611 International Marketing | 5 |
| MAR 612 Marketing Research | 5 |
| MAR 690 Advanced Marketing Management | 5 |
| MAR 693 Independent Study in Marketing | 5 |
| *Management* | |
| MAN 653 International Management | 5 |
| MAN 671 Problems in Comparative Management | 5 |
| MAN 672 Comparative Management Analysis | 5 |
| MAN 693 Independent Study in Management | 5 |

## MSM PUBLIC ADMINISTRATION

The MSM-Public Administration is a 45-quarter hour program composed of five required courses dealing with Public Administration: political, social and economic environment, theory, financial processes, research methodology and policy. An additional four courses which the student will be required to take are offered in six different modules: international, public policy, quantitative, behavior, local government and administrative problems. The student must take one course from four different modules. All students will be required to demonstrate competence in Quantitative Methods and Public Personnel Administration or will be required to take these courses.

*Note:* Individuals taking courses as special students are reminded that only up to fifteen quarter hours can be transferred toward their degree after they have been admitted to the program.

*Program of Study*

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* | | **25** |
| PAD 600 Political, Social and Economic Context of Public Administration | 5 | |
| PAD 601 Organizational Theory and Administrative Behavior | 5 | |
| PAD 602 Public Finance and the Budgetary Process | 5 | |
| PAD 603 Research Methods in Complex Public Organizations | 5 | |
| PAD 604 Public Policy | 5 | |
| *Module Courses:* | | **20** |
| | | **45** |

## PUBLIC ADMINISTRATION MODULES:

*Module 1:*
- PAD 610 — Development Administration
- PAD 611 — International Public Administration

*Module 2:*
- PAD 520 — Values and Technology in Modern Society
- PAD 621 — Public Interest and the Public Trust
- PAD 622 — Democracy and the Administrative State
- PAD 523 — The American Military Establishment

*Module 3:*
- PAD 630 — Quantitative Methods and Computer Skills
- PAD 631 — Management Information Systems
- PAD 632 — Decision-Making Theory and Practice
- PAD 633 — Public Policy Analysis and Evaluation

*Module 4:*
- PAD 640 — Public Personnel Administration
- PAD 641 — Dynamics of Individual Growth
- PAD 642 — Small Group Dynamics
- PAD 643 — Organizational Development and Change

*Module 5:*
- PAD 650 — Regional and State Government Administration
- PAD 651 — Urban and Municipal Government Administration

*Module 6:*
- PAD 660 — Administrative Law and Procedures
- PAD 561 — Collective Bargaining in the Public Sector
- PAD 562 — Administrators and the Role of Women
- PAD 663 — Government and Minority Group Relations
- PAD 564 — The Public Administrator and Media Relations

### MSM REAL ESTATE AND REGIONAL DEVELOPMENT

A *Master of Science in Management* with a concentration in Real Estate is available to persons interested in graduate work in Real Estate.

University graduates in real estate find employment in: land planning and development; real estate investing and counseling; environmental planning; development of new cities; international real estate; recreational land use developments; construction management; corporate real estate divisions; governmental agencies; appraising; marketing or residential, commercial, and industrial properties; property management, such as of large apartment complexes, office buildings, and shopping centers; conventional and creative real estate financing through financial institutions, such as commercial banks, savings and loan associations, life insurance companies, mortgage bankers and mortgage brokers; and teaching in the rapidly growing field of real estate education. Further, competent real estate talent is being called upon for participation in the rapidly growing field of real estate syndication, limited partnerships and joint ventures.

*Program Prerequisites:* one semester or quarter of financial management; two semesters or quarters of economics; one year of work experience in the real estate industry or an undergraduate major in business administration.

*Program of Study*

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* | | **25** |
| RES 695 Masters Project | 5 | |
| Four of the following courses: | | |
| RES 685 Seminar in Real Estate Finance | 5 | |
| RES 686 Seminar in Real Estate Valuation Theory and Practice | 5 | |
| RES 687 Regional Planning and Development | 5 | |
| RES 688 Seminar in Urban Housing Policy and Problems | 5 | |
| RES 689 Seminar in Real Estate Investment and Taxation | 5 | |
| *Electives:* with permission of the faculty advisor | | **20** |
| | | **45** |

*Remark:* a specialization in industrial real estate is offered with the advice and support of the Society of Industrial Realtors

## CERTIFICATE PROGRAMS

The overall purpose of the certificate programs is to provide *practicing managers* with advanced training in the techniques and methods pertinent to their areas. The programs are for both degree and non-degree seeking students, and culminate in the awarding of a certificate.

### EMERGENCY MEDICAL SERVICES (EMS) SYSTEMS ADMINISTRATION

The objective of the program is to train managers of EMS Systems (such as Emergency Departments in hospitals, fire rescue squads and coastguards), to manage efficient and effective EMS Systems.

In addition, it will be designed to help planners, coordinators and evaluators on the local, regional and state level EMS Systems to make better decisions in an environment that is rapidly changing.

The program will focus particularly on those people who are already in the field of Emergency Medical Services. We hope to meet individual needs of these trainees, considering their expertise, areas of responsibility and time available for training. The program will educate them so that they are better prepared to provide expertise, either in the developmental or operational phases of local, regional and state EMS systems.

**Courses:**

The Certificate Program consists of four required courses. Each carries 5 academic credits. The required courses are:

HCM 414 or HCM 682: Health Delivery Systems
HCM 684: Management for Health Facilities
HCM 523: Introduction to Emergency Medical Systems Management
HCM 624: EMS Seminar

For additional information contact the Division of Management.

## INSURANCE

The Certificate in Professional Insurance Accomplishment is a program to enable individuals in, or wishing to enter, the insurance industry to obtain recognition for their attainments in insurance education.

The courses leading to the Certificate may be taken by both degree-seeking students as part of their regular programs, or by special, non-degree seeking students who may be seeking professional recognition and qualifications.

The Certificate Program requires participants to obtain 30 quarter hours, or six five-credit hour classes, in senior (400 level) insurance courses. The Insurance Certificate requires participants to take five required and one elective course.

Those required are:

INS 405 — Introduction to Insurance
INS 410 — Casualty Insurance I
INS 411 — Casualty Insurance II
INS 412 — Property Insurance I
INS 413 — Property Insurance II

The elective should be selected from:

INS 407 — Life Insurance
INS 416 — Business & Estate Insurance Planning
INS 417 — Group Insurance and Pension Plans
INS 435 — Employee Benefits and Executive Compensation

Inquiries concerning the Certificate for Professional Insurance Accomplishment should be addressed to the Division of Policy, Marketing, and Environment.

## MANAGEMENT INFORMATION SYSTEMS

This Program is designed as a three course sequence for systems professionals and users heavily involved in the information systems development activity. These courses may be taken as part of a regular degree program or the opportunity exists for any interested individual to participate as a special student without pursuing a formal degree. The purpose of the Program is to provide advanced study to complement the work experience of practitioners who deal with information systems problems on a regular basis in their organizations. The sequence consists of three especially chosen courses to provide this complementary background:

MAN 550 — Information Systems in Organizations
MAN 551 — Analysis of Information Requirements
MAN 552 — Design of Information Systems

Additional information about these offerings may be obtained from the MIS Certificate Program coordinator in the Division of Management.

### PERSONNEL ADMINISTRATION

The objective of this program is to provide training in advanced personnel management techniques and methods to personnel professionals who do not necessarily wish to seek a degree. The program is aimed at developing immediately applicable skills in individuals who are assumed to already have an adequate foundation in the concepts and role of the personnel management function. A certificate of completion signed by the dean of the School will be awarded to any student who completes the program of four five-credit hour courses (20 hour total) in the personnel management area of concentration at the graduate level. The program begins in the fall term only. College level skill in statistics is assumed to be a prerequisite for entry into this program.

The Certificate Program consists of three required courses plus one elective. The required courses are:

MAN 558 — Seminar in Personnel Management (5)
MAN 644 — Personnel Selection and Placement (5)
MAN 645 — Wage and Salary Administration (5)

The elective may be selected from the following:

MAN 643 — Personnel Training and Development (5)
MAN 650 — Labor Relations (5)
MAN 646 — Behavioral Science in Management (5)
MAN 690 — Research Methods in Management (5)

For information concerning admission to this program contact the Management Division.

### REAL ESTATE AND REGIONAL DEVELOPMENT

In order to provide Real Estate professionals with an opportunity to do advanced University work in their area of specialization, the Real Estate Institute has initiated a certificate program in Real Estate. A Certificate of Completion signed by the Director of the Institute will be awarded to any student who completes a program of six-five credit hour courses (30 hours total) in the Real Estate area of concentration at the upper division or graduate level. The courses will be selected during the orientation course with an advisor at the time of admission.

The Certificate Program will be given at a level equivalent to upper division and graduate work. In order to maintain the integrity of the certicate program a B average is required for course work taken, even though it is not a regular degree program. Grade B level performance is considered above average work. An individual will not be awarded the Certificate unless he or she performs *above average* overall for the six courses in the sequence.

This program is designed for individuals who are not necessarily interested in working for a graduate degree, but who desire advanced training in their area of specialization. The series of six courses covers major topics in the real estate industry. The courses cover these topics in depth from both a theoretical and practical viewpoint.

Qualification for the certificate program will be judged on the basis of the competence of the individual in his profession and not on previous college work or special examination. An interested professional discusses his background and interests with a faculty advisor who will determine the appropriateness of the certificate program for the individual and the acceptability of his qualifications. Upon acceptance by the advisor, the individual will register for a non-credit two hour orientation course through Continuing Education. The fee for this course will be $25.00. The student will then register as a special student to satisfy the six course requirement for the certificate.

## COURSE OFFERINGS

*NOTE* — Course numbers ending in -93, -95, and -97 are special topics courses and may be taken only by *admitted* students with the approval of the instruotor, the divlsion chairperson, and the Dean.

### ACCOUNTING

ACC 300 ACCOUNTING FOR DECISIONS (5) (F,W,S,SS) Accounting concepts and techniques essential to administration of a business enterprise and the determination of income and financial position; asset and equity accounting in proprietorships and corporations.

ACC 301 INTRODUCTION TO THE ACCOUNTING PROCESS (2) (F,W,S,SS) Analysis of the accounting cycle and the technical procedures used in classifying, summarizing, and interpreting the transactions of a business entity. A strongly recommended elective to be completed by those wishing to reinforce their financial accounting knowledge prior to taking BUA 307.

ACC 401 FINANCIAL ACCOUNTING I (5) (F,W,S,SS) An exploration of concepts, standards, and principles underlying financial reporting with major emphasis upon the measurement, analysis, and interpretation of income and changes in financial position (funds flow). Prerequisite: 9 quarter hours of introductory financial and managerial accounting with grades of "C" or better and BUA 301.

ACC 402 FINANCIAL ACCOUNTING II (5) (F,W,S,SS) A continuation of ACC 401 with major emphasis upon the accounting concepts, standards, and principles underlying the measurement and reporting of financial position. Prerequisite: ACC 401 or equivalent.

ACC 403 FINANCIAL ACCOUNTING III (5) A continuation of ACC 402 with major emphasis on accounting for partnerships, business combinations, consolidated financial statements, and on financial statement analysis. Prerequisite: ACC 402 or equivalent.

ACC 405 MANAGERIAL ACCOUNTING (5) (F,W,S,SS) Determination and control of production costs; job order and process systems; actual and standard costs; budgetary control, cost and profit analyses, and other considerations for performance measurement and analysis. Prerequisite: ACC 401 and BUA 302.

ACC 406 INCOME TAX ACCOUNTING (5) (F,W,S) A survey of federal income taxation with primary emphasis on the taxation of individuals and corporations. Prerequisite:ACC 402, or equivalent.

ACC 407 AUDITING (5) (F,W,S) Standards and procedures applied by independent public accountants, ethics and responsibilities of auditors, development of audit programs, accumulation of audit evidence, and reporting. Prerequisite: ACC 402, or equivalent.

ACC 408 ACCOUNTING SYSTEMS AND MANAGERIAL ANALYSIS (5) A continuation of ACC 405 with emphasis on long range management performance measurement and analysis, design of accounting systems, internal control, management systems audits, and use of data processing equipment. Prerequisites: ACC 405 or equivalent, and knowledge of COBOL language.

ACC 412 TOPICS IN AUDITING (5) An in-depth study of recent developments in auditing. Prerequisite: ACC 407, or equivalent.

ACC 413 TOPICS IN TAXATION (5) An in-depth study of recent legislative, administrative, and judicial developments in taxation. Prerequisite: ACC 406, or equivalent.

ACC 414 TAXATION OF CORPORATIONS AND PARTNERSHIPS (5) An in-depth study of income taxation of corporations and partnerships, including tax planning. Prerequisite: ACC 406, or 513, or equivalent.

ACC 417/LAW 407 LAW FOR ACCOUNTANTS (5) An intensive coverage of the fields of law that are of interest to CPA's and accountants.

ACC 424 TOPICS IN FINANCIAL ACCOUNTING (1-5) An in-depth study of recent developments in financial accounting. Prerequisite: ACC 402, ACC 502, or equivalent.

ACC 425 TOPICS IN MANAGERIAL ACCOUNTING (1-5) An in-depth study of recent developments in managerial accounting. Prerequisite: ACC 405, or equivalent.

ACC 497 SPECIAL TOPICS IN ACCOUNTING (1-10) (F,W,S,SS) For groups of students who wish an intensive study of a particular topic or a limited number of topics not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required. Written permission of the instructor, division chairperson, and dean required.

ACC 501 FINANCIAL ACCOUNTING (5) (F,W,S) An exploration of concepts, standards, and principles underlying financial reporting with major emphasis upon the measurement, analysis, and interpretation of assets, equities, income, and changes in financial position. Prerequisite: BUA 307, or equivalent, and consent of instructor, or MBA 627.

ACC 502 STANDARDS AND PRINCIPLES OF FINANCIAL ACCOUNTING (5) (F,S) A survey of official pronouncements on accounting standards and principles. Prerequisite: ACC 402 or ACC 501, or equivalent.

ACC 503 ADVANCED FINANCIAL ACCOUNTING (5) (F,W,S) Accounting for partnerships, business combinations, consolidated financial statements, diversified and multinational corporations, fiduciary relationships, and not-for-profit institutions. Prerequisite: ACC 402 or ACC 501, or equivalent, or consent of instructor. No credit given if ACC403, or equivalent completed previously.

ACC 506 GOVERNMENTAL AND INSTITUTIONAL ACCOUNTING (5) Budgeting, accounting, and reporting standards and practices for government and other not-for-profit entities. Prerequisite: ACC 402 or ACC 501, or equivalent.

ACC 508 ACCOUNTING INFORMATION SYSTEMS ANALYSIS (5) Coverage of accounting usage of computers. Emphasis on auditing and control of EDP systems. Use of flowcharting, decision tables, computer software, and case studies. Coverage of EDP topics typically in the CPA examination. Prerequisite: ACC 300 or BUA 306, or equivalent or MBA 605 and MBA 626, or equivalent.

ACC 512 AUDITING (5) (W) The standards and procedures applied by independent public accountants and their ethical considerations and responsibilities in the rendering of opinions on enterprise financial statements; internal auditing and control; and accounting systems. Prerequisite: ACC 501, or equivalent, or consent of instructor. No credit given if ACC 407 and 408, or equivalents, completed previously.

ACC 513 ACCOUNTING FOR INCOME TAXES (5) (F,S) Exploration of concepts of federal income taxes and tax planning with emphasis upon the determination of taxable income for the individual, the partnership, and the corporation. Prerequisite: ACC 501, or equivalent, or consent of instructor. No credit given if ACC 406, or equivalent, completed previously.

ACC 517 ACCOUNTING PROBLEMS (5) (W) Intensive study of selected advanced accounting topics including problems of multiple ownership, fund accounting, and actuarial applications; questions and problems from recent C.P.A. examinations. Prerequisite: ACC 503, or equivalent, or consent of instructor.

ACC 602 SEMINAR IN ACCOUNTING INFORMATION SYSTEMS I (5) Application of general systems concepts to accounting, operational, and related planning and control information requirements. Topical coverage such as

data base management systems, on-line real-time systems, time-sharing, etc., and application in accounting. Emphasis on the analysis of computer-based controls. Case histories and projects. Prerequisite: ACC 508, or equivalent.

ACC 603 SEMINAR IN ACCOUNTING INFORMATION SYSTEMS II (5) A continuation of ACC 602 with emphasis upon the theories underlying complex information systems. Prerequisite: ACC 602, or equivalent.

ACC 606 MANAGERIAL ACCOUNTING (5) In-depth study into the determination and control of production cost, budgetary control, cost and profit analyses, and considerations of alternative methods of performance measurement and analysis. Prerequisite: ACC 405 or MBA 627, or equivalent.

ACC 607 SEMINAR IN MANAGERIAL ACCOUNTING I (5) (S) Analysis of transfer pricing, product pricing, incremental profit analysis, decision models, alternative performance measurement techniques, and other advanced topics. Prerequisite: ACC 405 or MBA 627, or equivalent.

ACC 608 SEMINAR IN MANAGERIAL ACCOUNTING II (5) An intensive study of the controllership function in corporate organizations; an appraisal of the controller's role in planning, accomplishing, and evaluating company performance. Prerequisite: ACC 607, or equivalent.

ACC 610 SEMINAR IN FINANCIAL ACCOUNTING THEORY I (5) (W) A study of the theoretical structure of accounting, with special attention to asset and income definition, recognition, and measurement; an appraisal of pronouncements of professional accounting organizations. Prerequisite: ACC 503, or equivalent, or consent of instructor.

ACC 611 SEMINAR IN FINANCIAL ACCOUNTING THEORY II (5) A continuation of ACC 610 with emphasis on the problems of accounting for equities and price-level changes and other current issues. Prerequisite: ACC 600, or equivalent.

ACC 612 STUDIES IN AUDITING (5) (S) Professional and technical aspects of auditing practice; ethics and legal responsibilities; review of field work emphasizing materiality, sampling, and working papers, reporting problems including long-form and special purpose reports; study of recent auditing developments. Prerequisite: ACC 407 or ACC 512, or equivalent.

ACC 613 INCOME TAX PLANNING AND RESEARCH (5) An in-depth study of the taxation and planning aspects of a variety of business and other transactions. Emphasis will be upon developing an ability to perceive tax issues and to conduct research to resolve them. Prerequisite: ACC 406 or ACC 513, or equivalent.

ACC 614 TAXATION OF CORPORATIONS AND PARTNERSHIPS (5) The study of the federal tax consequences of the formation, operation, reorganization and liquidation of corporations; election of Subchapter S status; and the federal tax considerations in choosing between the corporation and the partnership as a vehicle for commercial activity is emphasized. Prerequisite: ACC 613 or permission of the instructor and the advisor for the taxation specialization.

ACC 615 TAXATION OF ESTATES AND TRUSTS (5) The study of the federal estate tax and federal gift tax provisions is emphasized. The income taxation of estates and trusts is integrated with estate and gift taxation. Estate and income tax planning are also considered. Prerequisite: ACC 613 or permission of the instructor and the advisor for the taxation specialization.

ACC 616 INTERNATIONAL ACCOUNTING (5) Comparative analysis of accounting concepts and practices in different countries; international accounting standards; problems of accounting for multinational corporations, including transfers of funds and income measurement; the role of accounting in national economic development. Prerequisite: ACC 503, or equivalent, or consent of instructor.

ACC 620 TAX ACCOUNTING THEORY AND TAX POLICY (5) The study of the tax accounting concepts and the judicial doctrines inherent in the federal tax law and in tax planning is emphasized. The relationship of taxation to national output and the effect of taxation on prices, resource allocation, and income distribution is examined. Prerequisite: ACC 406 or ACC 513, or equivalent.

ACC 621 CONSOLIDATED CORPORATE TAXATION (5) The in-depth study of the tax benefits inherent in multiple corporate groups determining income as a single taxable entity is emphasized. The limitations on the group as a whole, especially liberalized carryover provisions are also explored. Prerequisites: ACC 613 and ACC 614.

ACC 622 PARTNERSHIP TAXATION AND TAX SHELTERS (5) The intensive study of both the formation, operation, and dissolution of a partnership (general and limited) and the use of the partnership to establish and operate tax sheltered investments in real estate, oil and gas, leasing, farming, cattle and others. Prerequisite: ACC 614 or permission of the instructor.

ACC 623 TAX PLANNING AND FIDUCIARY TAXATION (5) The study of the income taxation of estates, trusts, and the beneficiaries thereof, including the determination of distributable net income, throwback rules, the grantor trust and income in respect of a decedent, is emphasized. The use of trusts in tax and estate planning is also explored. Prerequisites: ACC 613 and ACC 615.

ACC 624 CURRENT DEVELOPMENTS IN TAXATION (5) The study of recent legislative, administrative and judicial developments affecting taxation is effected through the application of research techniques to income tax and estate tax planning. Prerequisites: ACC 613 and ACC 620.

ACC 625 SEMINAR IN TAXATION (5) Intensive study of a particular topic or a limited number of topics. The topics included in this course will depend upon the availability of faculty with expertise in the following special classes of tax problems: advanced corporate taxation; taxation of deferred compensation; taxation of not-for-profit institutions; interstate, state, and local taxation; and others as current developments demand. Prerequisites: ACC 613 and ACC 620.

ACC 626 INTERNATIONAL TAXATION (5) The complex federal income tax provisions applicable to the foreign income of U.S. citizens, residents, and corporations, and to foreign persons with U.S. income is surveyed. The tax policy of developing and developed countries with respect to foreign investment is discussed in the context of international tax planning. Prerequisite: ACC 613 or permission of the instructor and the advisor for the taxation specialization.

ACC 630 BEHAVIORAL ACCOUNTING (5) Study of the effect of the process and products of accounting and of changes in the process and products on individual and group behavior; consideration given to how accounting can aid individuals and organizations to attain their goals. Prerequisite: ACC 402 or ACC 501 and 405, or equivalents.

ACC 631 ACCOUNTING AND QUANTITATIVE METHODS (5) Study of statistical and management science techniques that are or may be utilized in financial and managerial accounting. Prerequisites: BUA 302, 305, and 306, or equivalents.

ACC 693 INDEPENDENT STUDY IN ACCOUNTING (1-5) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

ACC 695 MASTER'S PROJECT (5) (F,W,S,SS) An individualized research project, and report, which may include field experience with a firm or agency, library research, computer programming, or project development. Permission of the faculty advisor is required before registering for the course. The course should be taken during the last half of the student's graduate program.

ACC 697 SPECIAL TOPICS IN ACCOUNTING (1-5) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

COE 325 COOPERATIVE EDUCATION-ACCOUNTING I (1-5) (S) A special program permitting accounting students to work during alternating quarters, up to a maximum of 3 quarters, in a public accounting firm, an industrial or, a not-for-profit enterprise, or a governmental agency in a job related to the area of concentration in their university program.

COE 425 COOPERATIVE EDUCATION-ACCOUNTING II (1-5) A continuation of COE 325.

MBA 612 AUDITING FOR MANAGERS (5) An exploration of the concepts and objectives of internal control, auditing, and audit reports from the point of view of the manager.

MBA 613 TAX ACCOUNTING FOR MANAGERS (5) An exploration of the concepts of federal income taxation and tax planning from the point of view of the manager.

## BUSINESS ADMINISTRATION (BUA) CORE COURSES

ACC/BUA 300 ACCOUNTING FOR DECISIONS (5) (F,S,W,SS) Accounting concepts and techniques essential to administration of a business enterprise and the determination of income and financial position, asset and equity accounting in proprietorships and corporation.

ECO 301/BUA 310 ECONOMICS, MAN AND SOCIETY (5) (F,S,W,SS) Relationship of economics to individual and group action. Identification of economic and non-economic objectives and problems. Analysis of economic behavior of individuals, business firms, public agencies, and interest groups. Public issue interpretation in the light of economic theory.

MAS/BUA 304 QUANTITATIVE METHODS FOR ADMINISTRATION I (5) (F,S,W,SS) The use of statistical tools in management, introduction to probability , descriptive statistics and statistical inference are included.

BUA 301 FINANCIAL MANAGEMENT (5) (F,S,W,SS) The financial functions of obtaining capital, managing assets, and of expending resources are examined from the perspective of a manager, as well as a financial officer. Attention will also be directed to some aspects of security market operations. Prerequisite: ACC 300 or equivalent.

BUA 302 OPERATIONS MANAGEMENT POLICY (5) Basic concepts and application of management science techniques for the design, analysis, and control of operational systems. The systems considered include those found in industry, the services, and the public sector. Among others, topics discussed include decision theory, financial analysis, forecasting, production, inventory and quality control, and simulation. Interrelationships of these areas to other functions within organizations are emphasized. Prerequisites: BUA 304 and 305, or equivalent.

BUA 303 PRINCIPLES OF MARKETING (5) (F,W,S,SS) A descriptive study emphasizing the functions and institutions common to marketing systems.

BUA/MAS 305 QUANTITATIVE METHODS FOR ADMINISTRATION (5) (F,W,S,SS) The use of statistical tools in management, course, statistical inference, testing of hypotheses, decision making, regression and correlation analyses. Construction of index numbers and time series analysis. Quantitative techniques for management are drawn together. Prerequisite: MAS 304 or equivalent.

BUA 306 INTRODUCTION TO INFORMATION SYSTEMS (5) (F,W,S,SS) Survey of the major problems of information systems and information processing in organizations. Brief study of basic computer concepts, the information systems development cycle, the relation between information systems and decision making, and the general systems framework for information problems. Prerequisites: Completion of the Computer Programming Proficiency Requirement, and BUA 309, 305.

BUA 307 ACCOUNTING FOR PLANNING AND CONTROL (5) (F,W,S,SS) Use of accounting concepts, techniques and financial data as an aid to management planning, coordination and control. Topics covered include cost behavior and control, budgeting, analysis concepts, performance measurement and analysis, and capital budgeting. Prerequisite: ACC 300 or equivalent.

BUA 309 ORGANIZATION AND MANAGEMENT (5) (F,W,S,SS) An analysis of organizations and the management processes of planning, organizing, directing, and controlling in the context of socio-technical systems. Individual, group, intergroup, and organizational responses to various environments and technologies are studied, as are pertinent techniques of manpower management.

BUA 314 BUSINESS AND SOCIETY (5) An examination of the interaction between business and the social, political, and legal order. Analysis of the appropriate and actual relationships and responsibilities of business to its various publics. The nature of property and profits, the balancing of claims of owners, employees, customers and citizens; elements of constitutional law; competition and monopoly; anti-trust policies and practices. Stress on the broad effects of the total environment upon the administration of the private sector of organization. Prerequisite: ECO 301 or equivalent.

ECO/BUA 311 APPLIED MACROECONOMICS (5) (F,W,S,SS) Aggregate economic performance and business conditions analysis. Analysis of the nature and causes of business fluctuation. Economic expansions and stagflation public policies for economic stability: fiscal policy, monetary policy and incomes policy. Sectoral analysis and macroeconomic forecasting. Prerequisite: ECO 301 or equivalent.

BUA 496 POLICY ANALYSIS (5) (W,S) The use of cases, guest lecturers, and gaming to integrate the analysis and measurement tools, the functional areas and public policy issues. The objective is to develop skill in broad areas of rational decision-making in an administrative context of uncertainty. Prerequisite: Should be taken in the last quarter of the senior year.

## BUSINESS ENVIRONMENT AND POLICY

BEP 401/ECO 417 MODERN BUSINESS HISTORY (5) An examination of the history of the corporation in the United States since the Civil War up to, and including, the development of the multinational corporation. An examination of the social and economic forces operative in the development of the corporate form. A full exploration of the current power of the corporate — and legal, and other, efforts to limit it. Prerequisite: BUA 312 or consent of instructor.

BEP 402 SOCIAL RESPONSIBILITY AND SOCIAL ACCOUNTING (5) The sources of the conception of corporate social responsibility. An examination of the classical doctrines as well as the developing new approaches to the conception of the corporation as a citizen. A portion of the course will be devoted to a discussion of social accountability and social accounting as a specific problem in corporate input. Prerequisite: BUA 312 or consent of instructor.

BEP 403 BUSINESS ENVIRONMENT AND POLICY FORMATION (5) A course studying the conceptual and environmental forces which establish the framework of business strategy and tactical decision. A critical analysis of conceptual processes which can limit the executive's capacity to respond to change in the total and in the business environment. Prerequisite: BUA 312 or consent of instructor.

BEP 404 SOCIAL SCIENCE OF BUSINESS (5) Sociological, anthropological, psychological studies of corporate management and the effect of corporate behavior. Emphasis will be upon existing data and on the development of research oriented proposals intended to develop new insights into the application of social science techniques to the problems of business as an institution and the society. Prerequisite: BUA 312 or consent of instructor.

BEP 405 BUSINESS AND THE ECOLOGY (5) A course on the effect of industrialization and technological change on the physical environment. An examination of the current legal, economic and political consequences of poliution, environmental damage, and abatement of these factors. Prerequisite: BUA 312 or consent of instructor.

BEP 425 THEORY AND PRINCIPLES OF PUBLIC RELATIONS (5) A course suitable for students of management in all areas of other disciplines, as well as the basic introduction to the theory, history, practice, and future of public relations. A comprehensive study of the field. Prerequisite: MAR 413 or consent of instructor.

BEP 426 PLANNING AND IMPLEMENTATION PUBLIC RELATION CAMPAIGNS (5) An advanced course in application of theory to actual implementation of public relations activities. Will include practice in preparation of speech ghostwriting, press kits, handling of special events, and complete production on a team basis of a multi-media public relations presentation. Prerequisite: BEP 425 or consent of instructor.

BEP 427 PUBLIC RELATIONS SEMINAR (5) Open to public relations emphasis students only. A course designed to allow the advance public relations student to pursue a specially selected, specific area of public relations (i.e. political, medical, financial, governmental, corporate, educational, etc.) through in-depth study under a tutorial style of instruction and guidance. Prerequisites: BEP 425 and BEP 426, or consent of instructor.

## FINANCE

FIN 310 PERSONAL FINANCE AND RESOURCE MANAGEMENT (5) (F,S) The application of organization, finance, and management concepts and methods to aid the individual in making personal financial and career decisions.

FIN 405 POLICIES FOR FINANCIAL MANAGEMENT (5) (F,W) The process of securing and allocating funds within the organization with emphasis on the relevant financial decision-making and policy aspects.

FIN 406 TOPICS IN FINANCE (5) (S) Extensions of topics selected from those covered in Finance 405. Specific topics may vary with students interests.

FIN 415 NONBANK FINANCIAL INTERMEDIARIES AND MARKETS (5) (W) The role of financial institutions, the sources and uses of funds of nonbank financial intermediaries, the objectives and constraints of these intermediaries, and the supply and demand for loanable funds in different financial markets.

FIN 416 COMMERCIAL BANK MANAGEMENT (5) (F,S) The management of bank assets and liabilities, specialized banking functions and the role of the commercial bank in financing business.

FIN 425 SECURITY ANALYSIS (5) (F,W) The intrinsic value and technical approaches to security analysis, personal portfolio development.

FIN 426 TOPICS IN INVESTMENT ANALYSIS (5) (S) Extensions of topics selected from those covered in Finance 425. Specific topics will reflect student interests.

FIN 435 FINANCIAL POLICIES OF NOT-FOR-PROFIT ORGANIZATIONS (5) (W) Financial processes relevant to governmental and other not-for-profit organizations. Emphasis is on legal, political, and market constraints on securing, managing, and expending funds.

FIN 493 INDEPENDENT STUDY IN FINANCE (1-10) (F,W,S,SS) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and division chairman required.

FIN 497 SPECIAL TOPICS IN FINANCE (1-10) For groups of students who wish an intensive study of a particular topic of a limited number of topics not otherwise offered in the curriculum. Consent of faculty supervisor and division chairman required.

FIN 507 WORKING CAPITAL MANAGEMENT (5) Intermediate theories and techniques of cash, amounts receivable, inventory, and amounts payables management. Prerequisite: BUA 301 or MBA 635.

FIN 508 SECURITY ANALYSIS AND STOCK MARKET OPERATIONS (5) Various approaches to evaluating the "worth" of a potential commitment of funds to a given security will be analyzed. In addition, the structure and operations of the various stock and bond exchanges will be clarified.

FIN 517 FINANCIAL MANAGEMENT OF SAVINGS AND LOANS (5) Financial management of savings and loan associations and other mortgage lenders; supply and demand of mortgage funds, state and federal regulatory bodies' legal and institutional characteristics and of mortgage markets. Prerequisite: BUA 301 or MBA 635.

FIN 545 SMALL BUSINESS FINANCE (5) The financial markets, financial instruments, and managerial policies and techniques available to potential and existing entrepreneurs and owner/managers. Emphasis will be upon analysis of areas of opportunity for small business, analysis of financing alternatives, and analysis of profitability.

FIN 555 FINANCIAL MANAGEMENT IN THE MULTINATIONAL CORPORATION (5) Capital budgeting, operational analysis, and financing decisions in the multinational context. Working capital management and intrafirm fund transfers. Measurement and evaluation of risk of internationally diversified assets.

FIN 605 ASSET SELECTION AND MANAGEMENT (5) The selection and management of short-term and long-term assets to achieve corporate objectives; working capital management and capital budgeting under certainty risk.

FIN 606 BUSINESS FINANCIAL STRUCTURE (5) The selection and management of alternative sources of funds to obtain the optimal capital structure: short-term financing, long-term financing, constraints and cyclical phenomena affecting capital structure, stockholder relations, reorganizations and mergers.

FIN 615 FINANCIAL MARKETS (5) Demand for and supply of loanable funds in several major financial markets, money market instruments, and the role of financial institutions in financial markets.

FIN 616 MANAGEMENT OF DEPOSIT INSTITUTIONS (5) The objectives, constraints, and policies applicable to the management of financial institutions having primary deposit functions: commercial banks, saving and loan associations, savings banks, and credit unions.

FIN 617 MANAGEMENT OF NONDEPOSIT INSTITUTIONS (5) The objectives, constraints, and policies applicable to the management of the nondeposit financial institutions: life insurance companies, property and casualty insurance companies, pension funds, investment companies, real estate investment trusts, and finance companies.

FIN 625 SECURITY ANALYSIS (5) Various approaches to evaluating the worth of a commitment of funds to a given security, personal portfolio development, and the investment environment.

FIN 626 PORTFOLIO MANAGEMENT (5) Financial theories will be applied to the construction of portfolios. Portfolio management techniques will be analyzed in regard to goals of individuals, corporations, and various financial institutions.

FIN 635 FINANCIAL MANAGEMENT OF GOVERNMENTAL ORGANIZATIONS (5) This budgetary process of identifying, justifying, and allocating funds. Stresses the securing of funds in the market and the efficient allocation of funds.

FIN 640 CAPITAL BUDGETING AND LONG TERM RESOURCE ALLOCATION (5) The theory of capital allocation at the level of the firm and empirical findings. Decision models and their application. The pattern of capital expenditure of industries and of the economy as a whole. Investment determinants. Prerequisite: MBA 635.

FIN 645 THE THEORY OF FINANCE (5) The rigorous theory of rational financial decision-making under both certainty and uncertainty to provide a basis for judging existing practice and a framework that readily accepts new developments in the field.

FIN 646 QUANTITATIVE METHODS IN FINANCIAL ANALYSIS (5) The applications of computer techniques to financial management of manufacturing firms and financial institutions. Prerequisite: MBA 635 or MBA 607.

FIN 655 INTERNATIONAL FINANCE (5) A comparative study of the institutional characteristics and internal efficiency of developed and underdeveloped capital markets. The relationships between world capital markets and prospects for integration. The role of multilateral institutions, multinational corporations, states, and the structure of trade in the international short and long term capital flows. The development of financial centers. Prerequisite: MBA 635.

FIN 693 INDEPENDENT STUDY IN FINANCE (1-5) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

FIN 695 MASTER'S PROJECT (5) An individualized research project, and report, which may include field experience with a firm or agency, library research, computer programming, or project development. Permission of the faculty advisor is required before registering for the course. The course should be taken during the last half of the student's graduate program.

FIN 697 SPECIAL TOPICS IN FINANCE (1-5) For groups of students who wish intensive study of a particular topic or a limited number of topics not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

## HEALTH CARE MANAGEMENT

HCM/HSM 413 HEALTH MANAGEMENT ENGINEERING (5) Basic theory of health systems analysis including information systems development and use and various industrial engineering and operations research tools and techniques. Prerequisite: HSM 401.

HCM/HSM 414 HEALTH CARE SYSTEMS (5) Description and analysis of various health care administrative systems, the interrelationships of providers and consumers, as individuals and as groups, the various payment mechanisms, and methods of evaluating quality of care. Prerequisite: HSM 401 or equivalent.

HCM/HSM 418 HEALTH CARE ACCOUNTING (5) Analysis of the accounting cycle and procedures for recording, summarizing and interpreting financial data captured in hospital transactions. Emphasis will be placed on accounting concepts most relevant to managerial decision-making including budgeting, cost accounting and control.

HCM/MAS 419 QUANTITATIVE ANALYSIS FOR HEALTH CARE (5) This course is designed to introduce the student of health care to various techniques of health data analysis. The format and development of the course material are intended for those with little mathematical background, basic algebra being the only requirement for the course. Topics covered are chosen for and related to their practical and potential applications in the health area.

HCM/HSM 502 HEALTH MANAGEMENT TECHNIQUE (5) Survey of management techniques, behavioral and quantitative, as applied to the health industry.

HCM/HSM 515 HEALTH PLANNING TECHNIQUES (5) Basic health planning methods and procedures. Functions performed and special support techniques of hospital, medical public health, nursing homes, educational and similar associations. Prerequisites: 1 semester of basic statistics.

HCM/HSM 517 HUMAN RESOURCES MANAGEMENT IN HEALTH FACILITIES (5) The personnel administration function in the health facilities. Includes study of personnel policies and procedures; recruitment, training, and retention of employees; personnel relations and benefit programs; motivation in human productiveness; group costs, the study of labor relations in the health field.

HCM/HSM 523 INTRODUCTION TO EMERGENCY MEDICAL SYSTEM ADMINISTRATION (5) This course is designed to explore the development and implementation of Emergency Medical Service Systems. It will cover history, legislation and structure and planning of Emergency Medical Services.

HCM/HSM 624 EMERGENCY MEDICAL SYSTEMS SEMINAR (5) This course is designed to explore in a seminar-workshop environment EMS topics designed for the EMS administrator and planner. Prerequisite: HCM/HSM 523.

HCM/HSM 631 PUBLIC HEALTH ADMINISTRATION (5) To develop an in-depth understanding of the role of the public health administrator, how he can function most effectively in this role, and how health care managers can best relate their goals and his.

HCM/HSM 680 APPLICATION OF MANAGEMENT SCIENCE IN HEALTH CARE (5) An examination of the quantitative and behavioral management tools as applied to actual cases. This course is designed to equip the student with logical decision making techniques in solving management problems in health care facilities. Prerequisites: HSM 400, HSM 401 or equivalent.

HCM/HSM 681 HEALTH MANAGEMENT ANALYSIS (5) Introduction to technique and methods of gathering and interpreting health care information. Survey of management science techniques as applied to health management. Prerequisite: HCM 591 or equivalent.

HCM/HSM 682 HEALTH DELIVERY SYSTEMS (5) Description of various health care delivery systems in the U.S. and other countries. The relationship to the social delivery system. Quality of health care, group practice and prepayment programs.

HCM/HSM 683 HEALTH LAW TRENDS (5) The legal and legislative basis of the health care delivery system, the relationships of health care providers and consumers in various practice settings, in the various payment mechanisms and in the field of mental health.

HCM/HSM 684 HEALTH MANAGEMENT (5) This course is an attempt to help students develop professional managerial skills and attitudes. The course will analyze the basic elements of organization and management. Prerequisite: HSM 400 or equivalent.

HCM/HSM 685 HOSPITALS ORGANIZATION AND ADMINISTRATION (5) Introduction to the organization and administration of acute care facilities. The course will provide opportunities to study the performance of hospitals and other health facilities through selected field experience.

HCM/HSM 687 SEMINAR IN HEALTH MANAGEMENT (1-10) Consideration of selected problem areas in health management including policy formulation, executive development, and cost-benefit analysis. Prerequisite: Consent of instructor.

HCM/HSM 688 HEALTH FINANCIAL MANAGEMENT (5) This course concentrates on various aspects of managerial finance in a health setting. The primary emphasis is on budgeting for operations and capital improvements, working capital management, third party reimbursement systems as well as long and short term financing strategies.

HCM 689 HEALTH CARE ORGANIZATION This course examines illness as a phenomenon which both influences and is influenced by society (the culture). As such, it can be viewed as a social deviance — which patients, the provider and the society attempt to control. An examination of conceptual, methodological and substantive issues in the study of social psychological and demographic factors which relate to occurrence of morbidity and mortality.

HCM/HSM 693 INDEPENDENT STUDY IN HEALTH CARE MANAGEMENT (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty sponsor, division chairman, and Dean required.

HCM/HSM 695 MASTER'S PROJECT IN HEALTH CARE MANAGEMENT (5-10) Each student is required to develop and conduct an individual project on a topic of interest. The topic shall be chosen in consultation with a faculty member in the School.

HCM/HSM 697 SPECIAL TOPICS IN HEALTH CARE MANAGEMENT (5) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty tutor, division chairman, and Dean required.

## INSURANCE

INS 405 PRINCIPLES OF INSURANCE (5) Types of risk; methods of handling risk; analysis of insurance as a principal method; organization and operation of insurance companies; bases for decision-making in management of personal and business risks.

INS 407 LIFE INSURANCE (5) Functions and uses of life insurance, types of policy contracts, calculation of premiums and reserves; investments; legal principles; organization, management, and supervision of companies.

INS 408 RISK MANAGEMENT (5) Concepts and philosophies of risk management; application of alternatives to handling risks, including risk retention, loss prevention, corporate insurance programs and self-insurance; insurance surveys and case studies.

INS 409 INSURANCE LAW (5) Legal environment and essentials of the law particularly applicable to the business of insurance; emphasis on statutory regulation in Florida.

INS 410 CASUALTY INSURANCE I (5) A broad concept of casualty insurance, including a thorough review of basic policies, dailies, underwriting, and losses; multiple line and comprehensive forms. Subjects covered include property and personal liability insurance, boiler and machinery insurance, air insurance, inland and ocean marine insurance, workmen's compensation, and surety.

INS 411 CASUALTY INSURANCE II (5) A continuation of INS 410, but including agency management and company administration.

INS 412 PROPERTY INSURANCE I (5) Basic principles of fire, and allied lines insurance, including standard fire insurance contracts, declarations, agreements, conditions, and exclusions; fire insurance forms, clauses, and endorsements; special and allied fire lines; marine and other insurance.

INS 413 PROPERTY INSURANCE II (5) Multiple-line risk and risk management; the multiple-line insurance industry; property and liability hazards and policy contracts; functional aspects of underwriting, rate making, and claims handling.

INS 415 PERSONAL INSURANCE PLANNING (5) Planning a personal program of insurance, integrating life, health and accident, property, pensions, and governmental programs.

INS 416 BUSINESS AND ESTATE INSURANCE PLANNING (5) Applications of life and health insurance to business and estate planning situations; emphasis on current practices and developments in retirement planning, business continuation, and estate conversions.

INS 417 GROUP INSURANCE AND PENSION PLANS (5) Group life and health insurance; policy terms, rates, and benefits; pension and profit sharing plans; organization, costs, administration, taxation, and legal aspects underlying pensions.

INS 418 MANAGEMENT OF INSURANCE ENTERPRISE (5) Analysis of the operations of insurance organizations; underwriting, rate making, regulation, legal organization, management and control, financial analysis, marketing systems.

INS 428 SOCIAL INSURANCE (5) Introductory analysis of the rationale for social insurance; structure of current social insurance programs; evaluation of programs; old-age, survivors, health, disability, and unemployment insurance.

INS 435 EMPLOYEE BENEFITS AND EXECUTIVE COMPENSATION PLANS (5) Emphasis on employee benefit plans; consideration of executive compensation, contractual arrangements, benefit formulas, and financing of death, disability, and retirement benefits; problems and policies.

INS 493 INDEPENDENT STUDY IN INSURANCE (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

INS 497 SPECIAL TOPICS IN INSURANCE (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

INS 600 GRADUATE SURVEY OF INSURANCE (5) Graduate examination of current problems in insurance, including theory of insurance, uses of insurance in business organizations; property and liability insurance, health insurance, and life insurance.

INS 693 INDEPENDENT STUDY IN INSURANCE (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

INS 697 SPECIAL TOPICS IN INSURANCE (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

## BUSINESS LAW

LAW 401 BUSINESS LAW I (5) Principles of law affecting the legal environment of business; law of contracts; sales; torts; agency and employment; legal relations of government and business.

LAW 402 BUSINESS LAW II (5) Bailments; shipment and sale of goods; suretyship; bankruptcy; commercial paper; real and personal property; insurance; relevant provisions of uniform commercial code.

LAW 407/ACC 417 LAW FOR ACCOUNTANTS (5) Intensive review of those fields of law usually covered in CPA, CLU, and CACU law examinations.

LAW 410 LEGAL ENVIRONMENT OF BUSINESS (5) Legal environment of business; analysis of legal principles affecting management; the role of law in business decisions; the legal tool as a system for order in the business arena; its effectiveness as a planning instrument. This course is a study of the importance of the impact of the law and legal institutions upon the field of commerce with attention to the regulation of competition through analysis of antitrust legislation, the workings of administrative law, the formulation of judicial decision, the power of constitutional provisions, various aspects of employment legislation, as well as other select topics.

LAW 493 INDEPENDENT STUDY IN BUSINESS LAW (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

LAW 497 SPECIAL TOPICS IN BUSINESS LAW (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

LAW 600 SURVEY OF BUSINESS LAW (5) Graduate level survey of business law which examines the social purposes, functions and forms of the law and the courts, particularly as they relate to business organizations.

LAW 693 INDEPENDENT STUDY IN LAW (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

LAW 697 SPECIAL TOPICS IN LAW (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

## MANAGEMENT

BUA 408 MANAGERIAL DECISION-MAKING (5) This course will concentrate on practical decision problems for the manager in an organization. Emphasis will be placed on the environment and definition of managerial problems and practical approaches to solving these problems. Prerequisite: BUA 302.

MAN 407 MANAGEMENT SCIENCE (5) Survey of management science-operations research from an applied point of view. Emphasis on the formulation of models of business problems such as: Allocations, Inventories, Project Management, Replacement, Transportation, Scheduling, Sequencing, Queuing Theory, and Competition. Prerequisite: BUA 305, or equivalent.

MAN 410 PRINCIPLES OF OPERATIONS RESEARCH I (5) Application of deterministic operations research models such as linear and nonlinear programming, networks (CPM), dynamic programming, and branch and bound techniques to managerial problems of allocation, planning and scheduling investment, and control prescheduling, investment, and allocation. Prerequisite: BUA 408.

MAN 420 SIMULATION OF MANAGEMENT SYSTEMS (5) Basic concepts in computer simulation of systems. Application of these concepts in a variety of managerial problems. The course covers waiting line models, continuous simulation models, heuristic methods, and management games. Several computer programs and languages for simulation are presented. Exposure to the operation and analysis of some simulation models. Prerequisite: BUA 305, 306, or equivalent.

MAN 422 INFORMATION SYSTEMS DEVELOPMENT (5) An intermediate level study of the analysis and design phases of the information systems development cycle. Covers topics in problem identification, specification of user requirements, enumeration of alternative design, and choice of the best design for the situation.

MAN 427 PERSONNEL INFORMATION SYSTEMS (5) A survey of personnel reporting requirements; assessment of information needs, manpower planning and development of integrated personnel systems. Prerequisites: BUA 306 and MAN 457.

MAN 428 PRODUCTION INFORMATION SYSTEMS (5) A study of the special problems associated with the development of information systems capability to support the production function of an organization. Review of information systems approaches to inventory control and work processing management.

MAN 430 OPERATIONS PLANNING AND CONTROL (5) The application of modern statistical and mathematical techniques to the planning and control of management systems. Emphasis will be placed on applications in forecasting, inventory, production scheduling and control, equipment selection and replacement, maintenance and materials handling. Prerequisites: BUA 302 and senior standing.

MAN 451 INTERNATIONAL MANAGEMENT (5) Introductory survey in management issues that confront the multinational enterprise. At least one class session is devoted to each of the following topics: review of basic trade theory; tariffs and trade barriers; organizational transfer; foreign exchange; institutions affecting the multinational manager, such as IMF, IDB, Ex-In Bank, EEC, IBRD; international financial management; issues in multinational accounting; personnel management; comparative business customs and behavioral issues; export-import procedures; conflicts with national interests.

MAN 452 INTERNATIONAL MANPOWER MANAGEMENT (5) National, as well as international, manpower policies are examined. Current trends in international labor movements will be analyzed, particularly as they affect international labor mobility. Corporate policies in manpower planning are viewed in an environment of rapid economic and political changes.

MAN 453 ORGANIZATION THEORY (5) A comparative analysis of various theories of organization including the classical, biological, economic, and Cyert-March models and of their treatment of fundamental structure, conflict, communications, group and individual behavior and decision-making. Primary emphasis on developing an integrated philosophy of organization and management. Prerequisite: BUA 309 or Equivalent.

MAN 454 INDUSTRIAL RELATIONS (5) Organizational and economic analysis of the problems and issues arising out of legislative and judicial efforts to define the rights, duties and responsibilities of labor organizations and management in the fields of labor relations.

MAN 455 LABOR MANAGEMENT AND COLLECTIVE BARGAINING (5) The various options of settlement of labor-management disputes. Evaluation of the nature, institutions and processes of collective bargaining, the analysis of labor-management issues and their significance, and the character and procedures of arbitration, mediation fact finding and conciliation. The course deals also with the analysis of the labor market.

MAN 456 BEHAVIORAL SCIENCE IN MANAGEMENT (5) An analysis of selected concepts in behavioral science, their interaction and application to management. Topics include perception, motivation, and group behavior.

MAN 457 PERSONNEL MANAGEMENT (5) Attention is focused on the theory and practice of modern personnel management as related to other management functions. Topics include: selection, training job and performance evaluation, and incentive schemes. Special attention is devoted to human resources management and development at various organizational levels.

MAN 458 SMALL BUSINESS MANAGEMENT (5) The organization and operation of the small business — the accounting, finance, production and marketing subsystems. The use of analytical approach. Problems of manpower management and information flow. Possible use of EDP. Case Studies.

MAN 461 INTERGROUP RELATIONS IN ORGANIZATIONS (5) A study of the psychological and sociological dimensions of intergroup relations. Attention to the problems experienced by subgroups in large and small organizations with particular reference to ethnic, racial, and subcultural groups. The roles and responsibilities of management in the constructive resolution and utilization of inter-group conflict in organizations.

MAN 462 DILEMMAS OF RESPONSIBILITY IN BUSINESS MANAGEMENT (5) The use of interdisciplinary concepts and tools to develop and understand the moral and ethical dilemmas involved in business and corporate spheres of activity. Specifically attended to are issues such as pollution, consumer affairs, and quality of public facilities.

MAN 463 PERSONNEL RECRUITMENT AND SELECTION (5) In-depth study of the personnel staffing function. Included an analysis of objectives, techniques, and procedures for forecasting manpower needs, recruiting candidates, and selecting employees.

MAN 464 WAGE AND SALARY ADMINISTRATION (5) Presents the theories and techniques used by management in the areas of work measurement, wage incentives and job evaluation.

MAN 493 INDEPENDENT STUDY (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required. CR/NC only.

MAN 497 SPECIAL TOPICS (1-10) Students who wish an intensive study of particular topic or a limited number of topics not otherwise offered in the curriculum. Consent of faculty supervisor and division chairman required. Grade Option.

MAN/PAD 534 PUBLIC SECTOR COLLECTIVE BARGAINING (5) Examines the labor force, labor markets, public manpower policy, and organizational manpower planning. Emphasis is given to recent developments in public and organizational policy.

MAN 541 HUMAN INTERACTION I: PERSONAL GROWTH LABORATORY (5) Experience designed to increase self-awareness of social impact, to increase sensitivity to the feelings of others, to improve interpersonal communication and increased understanding of the change-learning process. Study and analysis of class-group participation as well as other functional social groups.

MAN 550 PLANNING FOR INFORMATION SYSTEMS (5) An in-depth study of systems concepts as they apply to information systems in organizations. Consideration of planning for systems development and its accomplishment through the phases of the life cycle and of the overall management of the information systems function. Enrollment limited to students in the MIS Certificate Program.

MAN 551 ANALYSIS OF INFORMATION REQUIREMENTS (5) An in-depth study of the problems of determining effective information needs for systems users. Consideration of the development of data element dictionary capability, procedures for eliciting requirements and techniques for documenting requirement and report content. Enrollment limited to students in the MIS Certificate Program.

MAN 552 DESIGN OF INFORMATION SYSTEMS (5) An in-depth study of the problem of determining an efficient design to meet the requirements specified by the user. Consideration of the determination of alternative designs, selection of the "best" design and conversion of the design into programming specifications. Enrollment limited to students in the MIS Certificate Programs.

MAN 558 SEMINAR IN PERSONNEL MANAGEMENT (5) Overview and examination of the various aspects of the Personnel Management function. Course is only open to students enrolled in the Personnel Management Certificate Program.

MAN 601 SURVEY OF MANAGEMENT SCIENCE (5) An introductory course that will examine model building and the methodology, techniques and tools of Management Science. A survey of the analytic models available will be included.

MAN 605 DETERMINISTIC MODELS FOR MANAGEMENT ANALYSIS (5) Applications of deterministic models such as linear and nonlinear programming, network analyses (PERT), dynamic programming, and branch and bound algorithms to managerial problems of allocation, planning, scheduling, investment, and control.

MAN 606 STOCHASTIC MODELS FOR MANAGEMENT ANALYSIS (5) Applications of probabilistic models such as queuing, inventory, and renewal to their managerial problems.

MAN 611 STOCHASTIC MODELS FOR PROJECT MANAGEMENT (5) Review of deterministic models and principles, introduction to GERT, critical path methods, criticality index, and resource considerations in stochastic networks. Emphasis on operational decision-making, advanced topics and individual projects. Students will use the computer, and existing programs, to analyze/simulate hypothetical project networks and learn to interpret the results in order to facilitate operational decisions.

MAN 618 INFORMATION SYSTEMS PLANNING (5) An in-depth study of systems concepts as they apply to information systems in organizations. Consideration of planning for systems development and its accomplishment through the phases of the life cycle and of the overall management of the information systems function.

MAN 619 SEMINAR IN MANAGEMENT SCIENCE (5) New topics and new application areas will be explored. Lectures will relate the latest advances in the theory and application of Management Science.

MAN 620 SIMULATION OF MANAGEMENT SYSTEMS (5) Basic concepts of computer simulation of systems. Application of these concepts to a variety of managerial problems. Industrial dynamics, urban dynamics, and large system simulation. Simulation in economic analysis. Heuristic methods, management games.

MAN 621 INFORMATION REQUIREMENTS ANALYSIS (5) An in-depth study of the problem of determining effective information needs for systems users. Consideration of the development of data element dictionary capability, procedures for eliciting requirements, and techniques for documenting requirement and report content.

MAN 622 INFORMATION SYSTEMS DESIGN (5) An in-depth study of the problem of determining an efficient design to meet the requirement specified by the user. Consideration of the determination of alternative designs, selection of the "best" design and conversion of the design into programming specifications.

MAN 630 SYSTEMS ANALYSIS (5) A study of the systems approach to problem solving as it applies to any area of specialization. Consideration of the problems in determining system objectives, identifying system boundaries and constraints, marshalling resources for achieving system objectives, analyzing the subcomponents of the system and their respective objectives, and managing the system.

MAN 639 SEMINAR IN PRODUCTION CONTROL SYSTEMS (5) The design of control systems for production operations automation and its impact on organizations. Integrated operational — simulation approach. Group and individual projects.

MAN 641 HUMAN INTERACTION II: ORGANIZATIONAL CONSULTATION (5) Theories and approaches to organization development and change with a particular focus on public schools and organizations. Laboratory supervision on systematic consultation and action skills, including methods of assessment (survey feedback, milling, confrontation meetings, systems analysis), agenda-setting, feedbacks, coaching, third-party consultation for conflict management, and team training. Prerequisite: MAN 541.

MAN 642 ADVANCED PERSONNEL MANAGEMENT (5) Attention is focused on the theory and practice of modern personnel management as related to other management functions. Topics include: selection, training, job and performance evaluation, and incentive schemes. Special attention is devoted to human resources management and development at various organizational levels.

MAN 643 PERSONNEL TRAINING AND DEVELOPMENT (5) Determining training needs. Training methods. The training staff. Supervisor development. Equal Employment Opportunity Management.

MAN 644 PERSONNEL SELECTION AND PLACEMENT (5) Individual differences and their measurement in personnel selection and job placement. Job design and redesign. The learning process. Counseling and career guidance.

MAN 645 COMPENSATION ADMINISTRATION (5) An in-depth analysis of wage and salary administration including such topics as job evaluation, wage incentive systems, and work sampling.

MAN 650 LABOR RELATIONS (5) Examines the collective bargaining system in the United States, from the viewpoint of the practitioner. Various aspects of the environment, structure, processes, issues and impact of collective bargaining are considered. Special attention given to the negotiation and administration of agreements.

MAN 651 GOVERNMENT AND INDUSTRIAL RELATIONS (5) Survey of industrial relations law with special emphasis on the current status of union-management relations law. Covers the scope and content of current legislation, selected topics in applied labor relations law, and the role of the government.

MAN 652 COLLECTIVE BARGAINING TOPICS (5) An advanced course in labor relations for students with some background wishing more depth than that provided in introductory courses. Topics of contemporary interest, such as public sector collective negotiations are treated at length.

MAN 653 INTERNATIONAL MANAGEMENT (5) Graduate seminar which focuses on management issues that confront the multinational enterprise. Includes basic trade theory, tariffs and trade barriers, organizational transfer, foreign exchange, international financial management, export-import procedures, comparative business customs, personnel management, and institutions affecting the multinational manager.

MAN 660 INTERPERSONAL BEHAVIOR AND ANALYSIS (5) A human interaction-human relations training laboratory designed to increase self-awareness and understanding of behavioral dynamics in groups. Course aims to enable students to broaden their conceptual understanding of human interpersonal communications and conflict. Enrollment is limited to fifteen students per section.

MAN 661 GROUP PROCESSES IN ORGANIZATIONS (5) The social psychological processes of organizational functioning. The roles played by small groups in organizational settings.

MAN 662 ORGANIZATION DEVELOPMENT AND RENEWAL (5) A study of approaches, processes, and technologies for effecting organizational change and improvement based on behavioral science principles and practices. Attention will also be given to behavioral science theory and interventions which tend to promote greater organizational health and renewal.

MAN 663 CONFLICT IN ORGANIZATIONS (5) A critical examination of the role and impact of interpersonal and intergroup conflict in organizations. Models and approaches to utilizing and resolving conflict toward constructive personal and organization ends will be emphasized.

MAN 671 PROBLEMS IN COMPARATIVE MANAGEMENT (5) Discussion of literature; readings, cases, aimed at underscoring differences and similarities in management behavior in different countries and cultures. General instruction in obtaining and utilizing data on comparative management differences.

MAN 672 COMPARATIVE MANAGEMENT ANALYSIS (5) Development and testing of hypotheses concerning differences and similarities in managerial behaivor in different countries and cultures; discussion of implications; case analysis.

MAN 690 RESEARCH METHODS IN MANAGEMENT (5) Covers the research methods and analytical techniques most widely used in research in human resources and general management. Emphasis is on helping students to become aware of current techniques and their applications.

MAN 691 POLITICS IN ORGANIZATIONS (5) The objective of this course is to give the student experience in an executive role in contemporary organizations. The stress is on human interaction, decision-making under pressure, and organizational politics.

MAN 693 INDEPENDENT STUDY IN MANAGEMENT (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty sponsor and division chairman required. CR/NC only.

MAN 694 MASTER'S SEMINAR IN MANAGEMENT (1-5) An examination of recent research findings in selected areas of current concern. Emphasis is placed on readings, active discussion, and small short-term action and research projects. Students may make a preliminary selection of the master's thesis or project topic.

MAN 695 MASTER' S PROJECT IN MANAGEMENT (1-10) Each student is required to develop and conduct an individual research project or thesis on a topic of interest. The topic shall be chosen in consultation with a faculty member in the School.

MAN 697 SPECIAL TOPICS IN MANAGEMENT (5) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty tutor and division chairman required. Grade option.



## MASTER OF BUSINESS ADMINISTRATION PROGRAM

MBA 605 FINANCIAL ACCOUNTING ANALYSIS (5) A survey of the principles and procedures of accounting. The course covers both financial and management accounting. The principal emphasis is on the potential uses, as well as limitations, of accounting information. No credit will be given to students who have had undergraduate or graduate equivalents.

MBA/ECO 606 MANAGERIAL ECONOMICS (5) The application of microeconomic and macroeconomic concepts to decision making within the organization; supply and demand; market structure and market behavior in specific industries; basic aggregate economic models and forecasting. Prerequisite: MBA 607 or equivalent.

MBA 607 QUANTITATIVE METHODS IN MANAGEMENT (5) Introduction to basic quantitative tools for the analysis of problems arising in the management of organizations and the application of these tools to real-life problems. No credit will be given to students who have had undergraduate or graduate equivalents.

MBA 615 WORLD DYNAMICS AND THE ORGANIZATION (5) A macro examination of economic, political, and cultural variables affecting the organization. Emphasis will be placed on social indications, societal forecasting and organizational responses to those changes, given the nature and rate of change in different societies.

MBA 616 THE ORGANIZATION AND THE INTRA-NATIONAL ENVIRONMENT (5) A comparative analysis of particular public and private organizations in specific cultures and their interaction with other institutions; particular attention to environmental and institutional constraints on the organization. especially the contrasting of the goals of the organization with mores of the society.

MBA 617 ORGANIZATIONAL ANALYSIS (5) Study of concepts, theory, research, and operational problems of management. Emphasis is upon analyzing the management processes of planning, organizing, leading, and controlling and their relationship to the nature of the task, technology and the environment.

MBA 625 MANAGERIAL DECISION-MAKING (5) This course will investigate and analyze the decision problems that managers face in business, volunteer organizations, government, and the public sector. Emphasis in the course will be placed on providing a variety of decision-making experiences for the student. Prerequisite: MBA 607 or equivalent.

MBA 626 ORGANIZATION INFORMATION SYSTEMS (5) Introduction to information systems and their role in organizations from a user's viewpoint. Survey and application of the basic concepts necessary for understanding information systems. Study of the main activities in the development cycle used to acquire information systems capability. Prerequisite: MBA 617.

MBA 627 ACCOUNTING FOR DECISION MAKING (5) A survey of the various uses of accounting information both from the point of view of the management and the investor. The course covers advanced topics in financial accounting, and the techniques utilized in financial analysis. It also emphasizes the differences among alternative accounting principles and their effects on decision-making. Prerequisite: MBA 605 or equivalent.

MBA 635 FINANCIAL MANAGEMENT (5) In-depth examination of asset, liability and capital structure management with emphasis on capital budgeting techniques, risk evaluation, working capital management, and methods of short term, intermediate, and long term financing. Prerequisite: MBA 605 or equivalent.

MBA 636 MARKETING MANAGEMENT (5) A study of analysis and application of theory and problem solving in marketing management. Emphasis will be on the role of marketing in the organization, planning the marketing effort, management of the marketing organization, control of marketing operations and evaluation of the marketing contribution.

MBA 637 OPERATIONS MANAGEMENT (5) This course covers the analysis of design and operations in organizational systems. The systems approach is used to provide a framework or general model of analysis to which specific concepts, quantitative techniques, and tools can be related. The material presented has application to any organization of people and machines, such as hospitals, governmental agencies, service organizations, and industrial concerns. Prerequisite: MBA 607 or equivalent.

MBA 695 MASTER'S PROJECT (5) An individualized research project, and report, which may include field experience with a firm or agency, library research, computer programming, or project development. Course only taken in consultation with, and with approval of faculty adviser, division chairperson, and dean.

MBA 699 POLICY ANALYSIS (5) The use of cases, guest lectures, and gaming to integrate the analysis and measurement tools, the functional areas and public policy issued. The objective is to develop skill in broad areas of rational decision-making in an administrative context of uncertainty. Prerequisite: Should be taken in the last quarter of Master's Program.

## MARKETING

MAR 404 MARKETING MANAGEMENT (5) An analytic approach to the performance of marketing management. The elements of marketing mix as the focus of decision-making in marketing are studied and the case method of instruction is employed.

MAR 405 RETAILING MANAGEMENT I (5) An examination of the role of retailing in the marketing system. Attention is concentrated on fundamentals for successful retail management. The course emphasizes basic marketing principles and procedures including merchandising, markup-markdown, pricing, stock-turn, and sales and stock planning.

MAR 406 RETAILING MANAGEMENT II (5) This course treats the retail marketing concentration in terms of up-to-date merchandise management methods. Emphasis is on elements of profit, open-to-buy planning, return on investment, and inventory control. The course delineates the decisions made by retailing managements and reviews their available strategies. Prerequisite: MAR 405 or consent of instructor.

MAR 408 INTERNATIONAL MARKETING (5) The course studies the information required by marketing managers to assist in satisfying the needs of consumers internationally. Special emphasis will be given to the constraints of the international environment.

MAR 410 CONSUMER BEHAVIOR (5) The course offers an introduction to the analysis of the consumer as the basis for the development of the marketing mix.

MAR 411 MARKETING RESEARCH (5) An examination of the marketing research process and its role in aiding decision making. Emphasis is placed on evaluation and utilization of research information in making marketing decisions.

MAR 413 ADVERTISING PRINCIPLES (5) Advertising in business and society, providing a broad understanding of its social, communicative, and economic purposes; types and functions of advertising; research, media selection, budget determination, and other elements in the total advertising process.

MAR 414 ADVERTISING CAMPAIGN MANAGEMENT (5) Strategical approaches to managing advertising campaigns, including selection of approaches, market research, consumer target markets, media, and advertisements; development and control of budgets. Prerequisite: MAR 413 or consent of instructor.

MAR 415 PROMOTIONAL STRATEGY (5) The course deals with problems of decision-making in the areas of marketing communication methods, with primary emphasis on advertising.

MAR 416 PERSONAL SELLING (5) The development of effective salesmen/customer relationships is emphasized. Selection, training, and motivation of the sales force and the relationship between personal selling and the other elements of marketing strategy are analyzed.

MAR 417 MARKETING CHANNELS (5) The course focuses upon institutions, functions, and flows within channels of distribution and their integration into channels systems. Wholesaling and physical distribution activity are emphasized.

MAR 418 EXPORT MARKETING (5) This course emphasizes practical approaches to export marketing including marketing strategies by individual firms to serve foreign markets. Operational methods of identifying, establishing, and consolidating export markets with particular attention to the needs of smaller business.

MAR 419 TRANSPORTATION LOGISTICS (5) (Same Course as TRA 409) Consideration of transportation logistics and its relationship to production and distribution; characteristics, management, legislation, and public regulation, applied to modes of transportation.

MAR 423 INDUSTRIAL MARKETING (5) Marketing in the intermediate consumer environment. Problems met, and strategies for, marketing goods and services to commercial, industrial, and governmental markets.

MAR 429 REAL ESTATE MARKETING (5) (Same Course as RES 513) The course focuses upon application of marketing concepts and tools within the real estate industry.

MAR 431 MARKETING AND THE LAW (5) A policy and operational analysis of legislative acts and judicial interpretations of laws influencing organizations engaged in marketing activities.

MAR 433 CURRENT ISSUES IN MARKETING I (5) Intensive study of various topic areas in marketing. Course emphasizes student reading and research with oral and written reports. Students electing to take this seminar may take no more than 5 credit hours of independent study in marketing.

MAR 434 CURRENT ISSUES IN MARKETING II (5) Students electing to take this seminar may not take independent study in marketing. Prerequisite: MAR 433.

MAR 441 MARKETING OF SMALL BUSINESS ENTERPRISES (5) Designed to develop an understanding of the principles and practices which contribute to the successful marketing operation of a small business enterprise, this course deals with marketing policies, techniques and applications to aid the entrepreneur in this field.

MAR 451 MARKETING FOR NON-PROFIT ORGANIZATIONS (5) Marketing techniques as applied to non-profit organizations, including but not limited to, the marketing of such governmental programs as housing, education, health services, transportation, and Social Security.

MAR 490 MARKETING GAME COMPETITION (5) Focal point of the course is a computerized marketing management simulation. The course provides an opportunity for the student to participate as a member of the marketing management team of a firm in competition with other firms.

MAR 493 INDEPENDENT STUDY IN MARKETING (1-10) Individual conferences, supervised reading, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

MAR 494 MARKETING INTERNSHIP (1-10) Full-time supervised work in a selected organization. Prerequisites: At least twenty (20) hours in marketing, consent of instructor and divisional chairman.

MAR 497 SPECIAL TOPICS IN MARKETING (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

MAR 506 INTERNATIONAL MARKETING II (5) The course studies the information required by marketing managers to assist in satisfying the needs of consumers internationally. Special emphasis will be given to the constraints of the international environment.

MAR 593 INDEPENDENT STUDY IN MARKETING (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

MAR 597 SPECIAL TOPICS IN MARKETING (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

MAR 608 ADVANCED INTERNATIONAL MARKETING III (5) This course discusses the nature and scope of international marketing and explores multinational problems facing firms and other international marketing organizations, together with strategies for foreign market penetration.

MAR 610 ADVANCED CONSUMER BEHAVIOR (5) Modern comprehensive models of consumer behavior are utilized as a framework for understanding consumer decision processes.

MAR 611 ADVANCED MARKETING RESEARCH (5) The role of research in providing information for marketing decision-making including an examination of the research process and the tools available to the researcher.

MAR 613 QUANTITATIVE METHODS IN MARKETING (5) A study of the quantitative reasoning process and its usefulness for marketing decision-making. Each of the major decision areas in marketing is examined using existing quantitative models as aids to understanding marketing processes.

MAR 615 PROMOTIONAL STRATEGY (5) The course focuses on planning, problem-solving and decision-making as they apply to promotion programs. Primary emphasis is on advertising with discussion of the role of promotion in relation to other elements of the marketing program.

MAR 633 CURRENT ISSUES IN MARKETING I (5) Intensive study of various topic areas in marketing. Course emphasizes student reading and research with oral and written reports. Students electing to take this seminar may take no more than 5 credit hours of independent study in marketing.

MAR 634 CURRENT ISSUES IN MARKETING II (5) Students electing to take this seminar may not take independent study in marketing. Prerequisite: MAR 633.

MAR 690 ADVANCED MARKETING MANAGEMENT (5) Emphasis in the course is upon application and integration of concepts and tools through participation in the marketing management of a firm in competition with other firms. The course's focal point is a computerized marketing management simulation.

MAR 693 INDEPENDENT STUDY IN MARKETING (1-10) Individual conferences, supervised reading, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

MAR 695 MASTER'S PROJECT (5) An individualized research project, and report, which may include field experience with a firm or agency, library research, computer programming, or project development. Permission of the faculty advisor is required before registering for the course. The course should be taken during the last half of the student's graduate program.

MAR 697 SPECIAL TOPICS IN MARKETING (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

## PUBLIC ADMINISTRATION

PAD 301 FINANCING PUBLIC ORGANIZATIONS (5) Financial management in public organizations. The securing of funds through taxes and bond issues, the management of funds and expenditure decisions.

PAD 305 ADMINISTRATIVE STATISTICS AND DATA SYSTEMS (5) Quantitative techniques useful to public administration, non-parametric techniques, probability concepts and decision techniques are presented as well as concepts underlying use of data systems.

PAD 310 ORGANIZATIONAL GROUP PROCESSES (5) The impact of various organizational climates, tasks, roles and reward systems on the behavior of both the individuals and groups of employees in public organizations. Particular attention to alienation and motivation in job effectiveness and Public Service.

PAD 312 PUBLIC POLICY AND ITS ADMINISTRATION (5) Contemporary theories of policy analysis; the role of social, political, and cultural theories as they apply to the analysis and administration of public policies.

PAD 320 PERSONAL GROWTH AND ADMINISTRATIVE DEVELOPMENT (5) The administrator as a person, development of interpersonal skills. Self evaluation and career planning, training and education for the public service sector.

PAD 321 ADMINISTRATORS AND THE LEGISLATIVE PROCESS (5) A study of executive-legislative interactions; the impact of legislation and legislative processes on administrative policy decision-making and implementation; influence of administration on the legislating process.

PAD 325 INTERNATIONAL COMPARATIVE ADMINISTRATION (5) This course is conceived as introductory to a wide range of scholarly and practical ("applied") interests. Emphasis on institution building and development administration particularly within the Third World countries.

PAD 400 CONCEPTS AND ISSUES IN PUBLIC ADMINISTRATION (5) The function of Administrative Institutions in Society; the growth of administration through the bureaucratic model both as an art and science; contemporary and comparative forms and theories of organization and responsibilities of public servants.

PAD 401 ADMINISTRATIVE INTERACTION IN THE PUBLIC SECTOR (5) Definition and analysis of administrative interfaces with multiple and varied public and private organizations. A study of the role expectation, pressures, and opportunities of the administrator in a complex environment.

PAD 402 POLITICS OF ADMINISTRATIVE ORGANIZATION (5) The role of political processes in relationship to public organizations and the types of intra- and inter-organizational politics which are unique to public organizations. Effects of these political processes upon organizational performance and their role in promoting or thwarting organizational change.

PAD 403 PUBLIC PERSONNEL ADMINISTRATION (5) The general nature of public personnel administration, the development of the civil service system, concepts and issues currently applicable at the Federal, State and Local levels of government.

PAD 404 ORGANIZATION AND ADMINISTRATIVE THEORY (5) History and development. Historical survey of theories of public organization and of contemporary and emerging theories. With special attention to the role of bureaucratic theory. Case investigation of manifested influence of the bureaucratic model in its various forms at Federal, State and Local government levels.

PAD 405 GOVERNMENT AND ADMINISTRATION OF METROPOLITAN AREAS (5) An intensive analysis of administrative problems created by large complex urban areas comprising many political entities. Examines overlapping relationships within municipalities, experience in Dade County system, current trends, and suggested solutions.

PAD 406 ADMINISTRATIVE LAW (5) Surveys the principles of law from the perspective of the public administrator: administrative procedure, procedural due process, delegation of legislative power, regulatory administration, conflict-of-interest statutes, etc.

PAD 407 ADMINISTRATIVE LEADERSHIP AND BEHAVIOR (5) To expose students to a systematically related set of concepts for diagnosing human behavior in organizations and to establish a positive value for the analysis of problems involving people, structure, environment, task, technology and climate of the situation.

PAD 408 PUBLIC CHOICE (5) Some historical analysis on the origin and concept of the public interest in Public Administration. Its various formulations as a concept and its contemporary interpretations. Specific role definitions and concepts of the public interest and public policy.

PAD 409 ADMINISTRATION OF PERSONNEL RESOURCES (5) Problems of training in government service and management of human resources development, the concept of civil service career systems, evaluation of public personnel systems, human relations in supervision, and personnel theory are examined.

PAD 410 PUBLIC VALUES, ETHICS AND MORALITY IN CHANGING ENVIRONMENT (5) Theories of value; ethical systems and their influence of administration behavior and process; the administrator as an ethical actor; value conflict and resolution; philosophical basis of American thought.

PAD 428 BUDGETS AND THE ADMINISTRATIVE PROCESS (5) The theory and practice of various approaches to budgeting e.g. time-item, performance, program and PPBS budgeting. Special emphasis upon the role of the budget in shaping the performance and policy direction of public organizations.

PAD 493 INDEPENDENT STUDY IN PUBLIC ADMINISTRATION (1-10) Individual conferences, supervised readings, reports on personal investigations and similar undertakings. Prerequisite: Consent of faculty sponsor and program chairman required.

PAD 520 VALUES AND TECHNOLOGY IN MODERN SOCIETY (5) Surveys personal and societal value assumptions in the context of the technological society. Examines organizational-societal value structures and how technology creates rapid change, and new values which are alternatives to our existing values. Also interrelationship of the past, present and future are explored through futurism and forecasting techniques.

PAD 523 THE AMERICAN MILITARY ESTABLISHMENT (5) Traces the rise of the American military to its present position, assesses its current size, scope and cost and analyzes the various relationships it has with other parts of government, with key segments outside of government and with the country at large. Throughout, emphasis is placed on examining how a massively large, complex bureaucracy functions in the contemporary American socio-political environment.

PAD 561 COLLECTIVE BARGAINING IN THE PUBLIC SECTOR (5) The course deals with the nature and implications of collective bargaining for managers and employees in and students of public organizations. The course emphasizes similarities and differences between the private and public sectors as they apply to collective bargaining.

PAD 562 ADMINISTRATOR AND THE ROLE OF WOMEN (5) The course is designed for women and men who are interested in moving into management positions, or who have done so, and want to broaden their understanding of the changing role of women. Classes will allow for experimental as well as academic exploration of the issues. The course will also explore affirmative action programs: how they are designed, implemented, and evaluated.

PAD 564 THE PUBLIC ADMINISTRATOR AND MEDIA RELATIONS (5) Surveys the government-mass communication media relationship and then concentrates on how public managers handle media relations. Emphasis throughout is placed on questions of information handling unique to public organizations, involving, for example, adherence to Florida's Sunshine Law and the Federal Freedom of Information Act.

PAD 600 POLITICAL, SOCIAL AND ECONOMIC CONTEXT OF PUBLIC ADMINISTRATION (5) Examines the context in which public organizations operate, stressing relationship between such organizations and their multifaceted environment. Emphasis is on examining relevant social and cultural mores and patterns, political values and processes, governmental institutions, economic systems, resource availability, and other environmental factors currently significant to public organizations.

PAD 601 ORGANIZATION THEORY AND ADMINISTRATIVE BEHAVIOR (5) Historical perspective and philosophical foundations of contemporary and emerging organization theory and administrative behavior with emphasis on concepts of administrative leadership, the organization's members and systems, group dynamics, socio-psychological aspects of organization and management.

PAD 602 PUBLIC FINANCE AND THE BUDGETARY PROCESS (5) Examines the theory and practice of public budgeting and its relationship to the administrative processes of control, management and planning. Special emphasis will be given to the social balance question, the kinds and scope of government expenditures, the fiscal role of government in a mixed economy, sources of revenue available to government, administrative, political and institutional aspects of the budget and the budgetary process, and problems and trends in intergovernmental financial relations.

PAD 603 RESEARCH METHODS IN COMPLEX PUBLIC ORGANIZATIONS (5) Theories and concepts of research and evaluation. Specific focus given to action components of the research process, design and formulation, strategies and methodological tools for conducting research. What is the role of research in administrative decisions and in testing ways to implement public policy? A review of contemporary critiques on research design.

PAD 604 PUBLIC POLICY (5) An intensive analysis of the normative theories of public policy making, with emphasis on the processes by which policy choices are made and implemented by government agencies. The current trends and perspectives of effective policy development, such as participatory democracy, multi-valued choice, rationality versus extrarationality, study of policy environments, and policy roles of proactive public administration, are examined.

PAD 610 DEVELOPMENT ADMINISTRATION (5) The role of public administration in national development, with specific attention to theories of economic aid from external sources, and the effects of this aid. Theories and policies of economic and social development are explored and particular attention is given to the role of the United States in strengthening administrative capabilities as important means for achieving developmental goals in selected countries.

PAD 611 INTERNATIONAL PUBLIC ADMINISTRATION (5) The role of Public Administration Systems around the world and the impact of political and socio-cultural frameworks on administration. Focus on national and state organized politics and economics; problems or possibilities. A review of scope and programs of contemporary international public administration organizations.

PAD 621 PUBLIC INTEREST AND THE PUBLIC TRUST (5) Will analyze the meaning of the public interest, using both experimental and cognitive tools. The purpose is to allow individuals in the course to clarify their current definitions of the concept and to be exposed to alternative points of view. The course is intended for everyone in the public sector and all those who have the term "public" in their repertoire of justifications.

PAD 622 DEMOCRACY AND THE ADMINISTRATIVE STATE (5) Juxtaposes the contemporary administrative condition of American government with the values of the democratic state. Different approaches to democracy — in practice as well as in theory — will be analyzed and their implications for public organizations and individual administrators examined.

PAD 630/MBA 607 QUANTITATIVE METHODS AND COMPUTER SKILLS (5) Introduction to basic quantitative tools for the analysis of problems arising in the management of organizations and the application of these tools to real-life problems. No credit will be given to students who have had undergraduate or graduate equivalents.

PAD 631/MBA 626 MANAGEMENT INFORMATION SYSTEMS (5) Introduction to the application of computers to information processing problems in organizations. This includes a survey of the basic computer hardware and software concepts necessary for users to work with information processing personnel. The rudiments of a computer programming language will be taught and applied to data processing problems. Consideration will also be given to the managerial aspects of information systems planning and development.

PAD 632 DECISION-MAKING THEORY AND PRACTICE (5) Historically, there have been two distinct approaches to the study of decision-making, one based more on behavioral aspects, the other on quantitative aspects. Neither ought to exist without the other and they should be viewed as being complementary, even though in certain situations one approach may seem more promising than the other. This course is designed to enable the student to use the techniques of both approaches which have been developed in recent years. MBA 625 may be substituted.

PAD 633 PUBLIC POLICY ANALYSIS AND EVALUATION (5) A framework for evaluating public policy-making will be presented. The emphasis will be upon criteria and methodologies available for choosing among alternative courses of action. The systems approach, alternative futures and nth-order consequences or policies will be analyzed.

PAD 640 PUBLIC PERSONNEL ADMINISTRATION (5) This course focuses on the fundamentals of public personnel administration in general and specific issues of the civil service. Some of the specific issues which will be considered are: the merit system and civil service history and development; manpower development and training; the application of the behavioral approach in personnel administration; unique public personnel management problems; governmental unionization and collective bargaining; and future perspectives of personnel administration.

PAD 641 DYNAMICS OF INDIVIDUAL GROWTH (5) This course focuses on the importance of small group theory to the personal growth of the administrator and the role of interpersonal abilities in more effectively serving client groups. The course also deals with the expansion of the phenomenological world view of each student and with a look at existential theory and the dilemma of personal growth.

PAD 643 ORGANIZATIONAL DEVELOPMENT AND CHANGE (5) Contemporary approaches to improving the overall effectiveness of public organizations through the utilization of the applied behavioral sciences. Personal and executive development programs, team building, action research, etc. Survey of research on the effects of organizational development programs with special reference to public organizations.

PAD 650 REGIONAL AND STATE GOVERNMENT ADMINISTRATION (5) Surveys the historical development of regional administration, analyzes present administrative problems of the states and explores contemporary and

suggested remedial policies. Emphasizes the complex problems of the institutional relationships among local, state and regional governments and their implications for public policy-making.

PAD 651 URBAN AND MUNICIPAL GOVERNMENT ADMINISTRATION (5) Detailed examination of problems facing the municipal administrators, of the pressures upon the contemporary urban environment and of the administration of large metropolitan areas comprised of numerous political entities. Emphasis will be on determining current trends, discussion of cases and suggested solutions.

PAD 660 ADMINISTRATIVE LAW AND PROCEDURES (5) Emphasizes the responsibilities public administrators have under local, state and federal laws. Explores such concepts as client responsiveness under the law, the regulatory process, state administrative law systems, the executive order process, the relationship between administrative law and the checks-and-balance system, discretionary justice and others.

PAD 663 GOVERNMENT AND MINORITY GROUP RELATIONS (5) Explores the pressing contemporary issues of the relationship between government and minorities. It examines the clash between established institutional values and minority group values, surveys remedial programs aimed at dealing with the problem. Comparative case studies will be used to analyze public agencies' internal relations with minorities (recruiting, selection, etc.) as well as their different responses to the minority groups they serve.

PAD 690 INDEPENDENT STUDY IN PUBLIC ADMINISTRATION (1-10) Individual conferences, supervised readings, reports on personal investigations and similar undertakings. Consent of faculty sponsor and program chairman required.

PAD 691 INDEPENDENT RESEARCH IN PUBLIC ADMINISTRATION (1-10) An individualized research project and report which, if feasible, should include field work with a public organization. Permission of a faculty advisor is required before registering for the course which should be taken during the last half of the student's graduate program.

PAD 692 PUBLIC ADMINISTRATION INTERNSHIP (1-10) Supervised work in a public or quasi-public organization. Should not be undertaken until completion of required courses in Public Administration Progam. Consent of faculty advisor and program chairman required.

## REAL ESTATE AND REGIONAL DEVELOPMENT

RES 390 INTRODUCTION TO REAL ESTATE (5) Decision making processes for development, financing, marketing, and management of real estate space; economics of regional development and urbanization; public policy issues concerning urban environment and the real estate business. Prerequisite to all other courses in real estate and regional development.

RES 391 LEGAL ENVIRONMENT OF REAL ESTATE (5) Legal environment of real property ownership, transfer and brokerage; estates in land; sales contracts; mortgage transactions; title; conveyances; landlord and tenant; restrictions and zoning, eminent domain. Prerequisite: RES 390 or permission of instructor.

RES 400 REAL ESTATE FINANCE (5) Financial analysis and structuring of real estate projects; traditional and creative concepts and mechanisms for the construction financing and permanent financing of residential and income producing property. Prerequisite: RES 390 or permission of instructor.

RES 403 REGIONAL DEVELOPMENT (5) Measurement and forecasting of economic activity in an urban/regional context; factors influencing economic growth and land allocation. Prerequisite: RES 390 or permission of instructor.

RES 405 URBAN LAND PLANNING AND USE (5) Theories of city growth and structure; operations of the real estate market in land allocation; application of above concepts to current practices in city and regional planning. Prerequisite: RES 390 or permission of instructor.

RES 407 VALUATION OF REAL ESTATE (5) Valuation and appraisal framework applied to residential and income producing property; role of computers; valuation theory and process as a guide to business decisions. Prerequisite: RES 390 or permission of instructor.

RES 409 REAL ESTATE INVESTMENT (5) Fundamentals of acquisition, ownership, and disposition of investment property; taxation and tax shelter; cash flow projections; analysis of specific types of investment property, utilization of computers as a decision-making tool. Prerequisites: RES 390 or permission of instructor.

RES 411 URBAN LAND ACQUISITION AND DEVELOPMENT (5) Real estate development: acquisition of raw land; zoning, subdivision into sites; provision of utilities and services; financing; merchandising of improved sites; emphasis on design and development of residential communities. Prerequisite: RES 390 or permission of instructor.

RES 413 REAL ESTATE MARKETING (5) Organization and operation of a real estate brokerage office, including selection, training and financing of sales personnel; obtaining and controlling listings; process and methods involved in the selling of real estate; promotion activities, including advertising and public relations; growth problems; professionalism; ethics. Prerequisite: RES 390 or permission of instructor.

RES 415 REAL ESTATE MANAGEMENT (5) Theories and techniques of professional management of real estate; creating a management plan; merchandising space; economics of alternates; market analysis; the maintenance process; owner-tenant-manager relations; operating budgets; tax consideration; ethics. Prerequisite: RES 390 or permission of instructor.

RES 492 REAL ESTATE AND REGIONAL DEVELOPMENT POLICY (5) A capstone course in integrating all aspects of real estate and regional development learned in previous courses; projects, cases and field trips; to be taken in senior year. Prerequisite: Permission of instructor.

RES 493 INDEPENDENT STUDY IN REAL ESTATE (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

RES 497 SPECIAL TOPICS IN REAL ESTATE (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

RES 670 INCOME PROPERTY APPRAISAL (5) Valuation and appraisal framework applied to income properties; capitalization; rates and techniques; discounting and compound interest; mortgage-equity analysis; Ellwood analysis; role of computers; valuation as a guide to business decisions.

RES 671 INDUSTRIAL REAL ESTATE I (5) General overview of industrial real estate focusing on types of activities; locational requirements; financing techniques; brokerage; government influence; current trends; technological change; characteristics of industrial buildings.

RES 672 INDUSTRIAL REAL ESTATE II (5) Introduction to investment and valuation problems in industrial real estate; topics include taxation and investment analysis; discounted cash flow techniques; appraisal framework applied to income properties; computer will be utilized in approaching the above problems.

RES 674 INDUSTRIAL BROKERAGE (5) Distinctions between industrial brokerage and general real estate brokerage; role and functions of the industrial broker; industrial brokerage practice; negotiating and leasing; regulations and ethics.

RES 675 SEMINAR IN INTERNATIONAL REAL ESTATE (5) Current trends and issues affecting industrial real estate on an international level; topics include the multi-national corporation and its location decisions; foreign taxation; international trade and exchange rates.

RES 685 SEMINAR IN REAL ESTATE FINANCE (5) A study of financial institutions, their methods, and interregional flows of funds in mortgage markets. Further emphasis placed on national economic policies affecting mortgage markets. Prerequisite: Graduate standing and permission of instructor.

RES 686 SEMINAR IN REAL ESTATE VALUATION THEORY & PRACTICE (5) A study of the process of property valuation utilizing cost, market and income approaches. The role of computers and mass appraisal techniques will also be examined. Prerequisite: Graduate standing and permission of instructor.

RES 687 REGIONAL PLANNING AND DEVELOPMENT (5) Methods of measuring and forecasting economic activity and issues in allocating urban land. Techniques for analysis of government policies affecting urban growth and development. Prerequisite: Graduate standing and permission of instructor.

RES 688 SEMINAR IN URBAN HOUSING POLICY & PROBLEMS (5) Examining national housing policies and their formulation. The role of the public and private sectors in regard to housing problems. Effectiveness of housing policies. Prerequisite: RES 687 and permission of instructor.

RES 689 SEMINAR IN REAL ESTATE INVESTMENT AND TAXATION (5) The techniques of real estate investment analysis utilizing present value and cash flow approaches. The impact of Federal taxation on real estate investment decision. Prerequisite: Graduate standing and permission of instructor.

RES 693 INDEPENDENT STUDY IN REAL ESTATE (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

RES 695 INDUSTRY PROJECT (5) Advanced individual or group study of specialized problems in the real estate field. Guidance of study to be provided by Real Estate faculty. Prerequisite: Permission of adviser.

RES 697 SPECIAL TOPICS IN REAL ESTATE (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

## TRANSPORTATION MANAGEMENT

TRA 405 TRANSPORTATION SYSTEMS AND SERVICES (5) Survey and analysis of transportation modes including rail, motor, air, water, pipeline, and mass transit and their impact on the social and economic systems; current problems.

TRA 406 MASS TRANSPORTATION AND URBAN PROBLEMS (5) Urban and metropolitan transportation development and requirements; benefits and costs of alternative approaches to mass transit; management techniques and operating principles; policy and regulation.

TRA 408 TRANSPORTATION REGULATION (5) Economic and constitutional basis of transport regulation; regulation of industrial traffic and transport modes; scope of regulation; structure and policies of Federal and State regulatory agencies.

TRA 410 TRANSPORTATION RATE MAKING (5) Description and analysis of rate making for both passenger and cargo in the various modes of transportation including trucks, railroad, airlines, and ocean transportation. Classes may concentrate on one particular mode for practical applications.

TRA 419 TRANSPORTATION LOGISTICS (5) Consideration of transportation logistics and its relationship to production and distribution; characteristics, management, legislation, and public regulation, applied to modes of transportation.

TRA 441 AIR TRANSPORTATION (5) A comprehensive introduction to the total air transportation environment including basic areas in general economic characteristics; commercial, private, corporate, and airline categories; government promotion and regulation of the industry, including aircraft manufacturing and operation; air traffic control; and airport support and functions.

TRA 442 AIRPORT MANAGEMENT (5) Application of management principles to airport operation with emphasis on unique characteristics of airport finance; government relations and regulations; airline relations and interdependence.

TRA 443 AIRCARRIER MANAGEMENT (5) An introduction to the broad scope of airline management practices and policies; particular emphasis on problem analysis in financing, marketing, scheduling, fleet planning, facilities planning, maintenance and general operations.

TRA 492 TRANSPORTATION POLICY (5) Consideration of national transportation policy; principal policy issues currently facing the transportation modes.

TRA 493 INDEPENDENT STUDY IN TRANSPORTATION (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

TRA 495 TRANSPORTATION INTERNSHIP (1-10) Full time supervised work in a selected organization. Prerequisites: At least twenty (20) hours in Transportation, consent of instructor and divisional chairman.

TRA 497 SPECIAL TOPICS IN TRANSPORTATION (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

TRA 501 PUBLIC UTILITY PRINCIPLES (5) An analytical and descriptive survey course treating the historical development of public utilities; the economics, legal environment, and organization of public utilities is discussed and analyzed; regulation theory as it applies to electric, gas, water, and communications industries.

TRA 507 TRANSPORTATION OPERATIONS AND CARRIER MANAGEMENT (5) Contemporary management techniques as applied to carriers; emphasis on management problems peculiar to transportation firms; economic analysis of marketing problems, capital formation, costs, pricing, labor relations, and government regulation.

TRA 509 PHYSICAL DISTRIBUTION MANAGEMENT (5) Distribution in overall company operations; organization of the traffic function; determination of classification and rates; integration of transportation with production flow, inventory management, warehousing, marketing policies, and plant location.

TRA 515 TRANSPORTATION LOGISTICS (5) Quantitative methods applied to solving problems in business logistics; mathematical and statistical models; optionization theory and simulation. Problems selected from areas of physical distribution management, inventory control, mode selection, and facility locations.

TRA 600 GRADUATE SURVEY OF TRANSPORTATION MANAGEMENT (5) Graduate survey of transportation, its elements, and their impact on society. History, economics, and regulatory principles. Current policies and problems for all the major transportation modes.

TRA 693 INDEPENDENT STUDY IN TRANSPORTATION (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

TRA 697 SPECIAL TOPICS IN TRANSPORTATION (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

## URBAN AND REGIONAL AFFAIRS

URB 401 THE URBAN SCENE (5) Introductory course to the urban phenomenon; historical and contemporary consideration of cities; functions and purposes of cities; economic, social, and cultural aspects of urbanization.

URB 405 PLANNING & MANAGEMENT IN AN URBAN ENVIRONMENT (5) General examination of selected aspects of the urban environment that are becoming concerns for policy makers; topics covered include growth and development of urban and metropolitan areas, housing and transportation, the inner city, poverty and racial problems, and urban finance and politics. The purpose is to sharpen conceptions of how business is involved in the urban scene, and what steps it can take to ameliorate it.

URB 415 URBAN AND REGIONAL ANALYSIS (5) Theories of urban and regional growth; economics of location and agglomeration; urban and regional social accounting, economic base analysis, input-output models, gravity models, and linear-programming. Urban structure and performance.

URB 416 URBAN PROBLEMS AND POLICIES (5) Consideration of the scope of the urban agenda; selected problems of contemporary cities; use of benefit-cost analysis, program planning and evaluation, non-market decision-making, user charges, and externalities in an urban environment; interrelation of private and public sectors in managing aspects of the urban system; role and contributions of planners and other professionals.

URB 493 INDEPENDENT STUDY IN URBAN AND REGIONAL AFFAIRS (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

URB 497 SPECIAL TOPICS IN URBAN & REGIONAL AFFAIRS (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman required.

URB 503 COMPARATIVE URBAN SYSTEMS (5) Comparative analysis of the major characteristics, similarities, and differences of the urban process as manifested in the United States and abroad.

URB/UPT 505 URBAN DESIGN (5) Relationship of cities and space; design for urban living; architectural and other aesthetic considerations; human welfare and urban structure; planning methods in the private and public sectors; performance evaluation.

URB 510 URBAN GEOGRAPHY (5) Geographical approach to city systems; consideration of the contribution of geographers to urban analysis; field project.

URB/UPT 511 URBAN LAND USE PLANNING (5) Elements of the general land use plan; location and space requirements; the use of models in planning; development of the land use plan; policy plan; implementation.

URB 535 URBAN DEMOGRAPHY (5) Detailed analysis of demographic methods applied to the urban environment.

URB 585 FACULTY-STUDENT WORKSHOP IN URBAN STUDIES (5) Urban studies workshop that gives faculty and students an opportunity to present reports on their current research and listen to invited researchers in urban affairs.

URB 600 SURVEY OF URBAN AFFAIRS (5) Graduate level survey course, encompassing the dynamics of the urban environment, including urban form and structure, land use patterns, housing, transportation, education, poverty and race, and other policy and problem considerations. Implications of management decisions.

URB 693 INDEPENDENT STUDY IN URBAN AND REGIONAL AFFAIRS (1-10) Individual conferences, supervised readings, reports on personal investigations. Consent of faculty tutor and divisional chairman required.

URB 697 SPECIAL TOPICS IN URBAN AND REGIONAL AFFAIRS (1-10) Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and divisional chairman.

# SCHOOL OF EDUCATION

The School of Education offers both bachelors and masters degree programs that meet requirements for certification to be employed as a teacher, counselor, school psychologist, supervisor, or principal in Florida schools.

All degree programs of the School make every effort to recognize the urban and multi-cultural context in which schools in South Florida operate, and the commitment of the University to international understanding. The School also provides service to area schools and other educational agencies in South Florida on a variety of programmatic and operational matters with which they must deal. Research and development activities are carried out by the faculty to improve the effectiveness of both the School's personnel development and service missions.

The School of Education has six divisions, each responsible for specific bachelors and masters programs leading to those degrees and appropriate professional certification. Detailed information on each of the programs of the Divisions is given below.

The School of Education maintains an Office of Student Information and Advisement (D.M. 398). The prospective student is invited to direct inquiries there for general information on careers in Education and on the program in which he or she is interested.

## GENERAL PROGRAM DESIGNS

### UNDERGRADUATE

Undergraduate courses offered by the School of Education are designed to be performance- or competency-based. Typically, all courses include a requirement to spend time in schools as well as class time on campus.

The typical undergraduate student will complete 90 quarter hours in study at Florida International, and all are expected to complete the last 45 hours of their undergraduate study at Florida International University. Twenty quarter hours taken as a Special Student at the University may be applied to a bachelors degree program if the work is applicable to the student's major.

*Foundations of Education Requirement:* Teacher certification regulations in Florida require completion of one course each in the *social* and *psychological* foundations of education. Courses that meet this requirement are offered in the Community College, and the student is urged to complete those courses before enrolling at Florida International. Otherwise, courses in the two areas must be completed at the University and should be taken in the first quarter of registration. The following courses offered at the University meet this requirement:

*Psychological Foundations*
PSY 307 Human Growth and Development (5)
*or*
PSY 305 Introductory Educational Psychology (5)

*Social Foundations*
SOC 343 School and Society (5)
*or*
PHI 326 Philosophies of Education (5)
*or*
HIS 475 Education in History (5)

*Reading Competencies Requirement:* A new educational regulation in Florida requires that all persons applying for initial teacher certification show evidence of having been prepared in specific skills for teaching Reading. All programs in the School are designed to meet this requirement, and the student's advisor will develop his or her program of study accordingly.

*Professional Education Core:* Every teacher education student, no matter his or her area of specialization, must enroll in three common courses during the Junior year. This common "core" consists of the following:

EDU 305 Schooling in America (5)
EDU 311 General Teaching Lab I: Basic Teaching Skills (5)
EDU 312 General Teaching Lab II: Human Relation Skills (5)

Subsequent special teaching laboratories and courses build on these core courses to extend and refine understandings and skills. All programs include one full quarter of student teaching.

Bachelors programs typically require course work in the College of Arts and Sciences or one of the other Schools. These courses provide necessary subject matter preparation to go along with professional preparation.

A student graduates with a *Bachelor of Science* degree and is qualified for a Rank III graduate teacher certificate in a field of specialization.

Professional education courses beyond the core and offered as a part of undergraduate teacher certification programs are open only to a student who has been admitted to a teacher preparation program. Other students may be admitted by permission of the course instructor only.

### GRADUATE

Graduate courses offered by the School are also designed to be performance- or competency-based. Graduate programs are typically designed to require some course work in Education, some in the College of Arts and Sciences or one of the other Schools, and electives in any academic unit.

The specifics of any masters degree program are developed between the student and his or her advisor to reflect individual student interests within the context of professional certification requirements. A typical program will include courses, seminars, and appropriate field experiences.

The typical graduate student will complete 45 quarter hours at Florida International to earn a *Master of Science* in Education degree. The programs in Counselor Education and School Psychology require 90 quarter hours. As a general rule, a student may transfer 10 quarter hours taken at another accredited college or university toward a 45-quarter hour masters degree and 15 toward a 90-quarter hour program at Florida International. Also, 15 quarter hours of work taken as a Special Student at Florida International may be applied to a masters program if applicable to the student's major.

## ADMISSION

### UNDERGRADUATE

The School will accept as an undergraduate any person who holds an *Associate of Arts* degree, or its equivalent, and will provide that student with a program leading to the bachelor degree and teacher certification. A student having an *Associate of Science* degree will also be accepted by the School and will receive assistance in developing a program of studies as required for the bachelor degree sought. Most programs require specific lower division prerequisites. These should be completed in the community college. Otherwise, admission to the School of Education may have to be delayed until this prerequisite coursework has been completed.

### GRADUATE

A student applying for admission to graduate study must meet the criteria used in The State University System of Florida. Presently these are either a 3.0 or "B" average in the upper division or a combined score of 1,000 on the Graduate Record Examination (verbal and quantitative aptitude sections). A special CLEP examination may be used in lieu of the GRE test by certain students seeking admission to the masters degree program in Vocational Education. Inquiries about this should be directed to the Chairman, Division of Vocational and Adult Education. Further, any given *Master of Science* degree program may have admission stipulations that go beyond these criteria to include such things as prior professional training and/or experience.

The student should carefully check this catalog *and* consult with the Division office in the School that is responsible for the academic major in which he or she is interested *before* applying for graduate admission to the University to be sure that *all* admissions criteria are known.

## GRADING SYSTEM AND POLICIES

Course work in the School of Education is graded A, B, C, D, CR, NC (see page 16 for further information).

*Undergraduate* students must maintain an overall GPA of 2.0 in order to graduate. The grade of D is not accepted toward graduation in any *required* program of study course, be it in the School of Education or any other unit of the University. Further, a student will not be approved for student teaching with a grade of D in any required program of study course.

*Graduate* students must maintain an overall GPA of 3.0 in order to graduate. The acceptance of C and D grades at the Masters degree level varies by program. Therefore, students will be informed by their adviser as to the policy in the program in which they are enrolled.

## DIVISION OF GENERAL PROFESSIONAL EDUCATION AND EDUCATIONAL ADMINISTRATION

The Division offers masters programs in Administration and Supervision and the undergraduate "core" courses required for every teacher education student.

## UNDERGRADUATE COURSES

The Division offers the three "core" courses required for every teacher education student: EDU 305, EDU 311, and EDU 312.

## GRADUATE PROGRAMS

The Division offers masters programs in Administration and Supervision (Elementary, Secondary, or General). Typical programs of study in these areas are outlined below. In addition, each student must satisfy, as a part of the degree program, a state requirement in reading. As soon as students are admitted to the master's degree program, they should see their assigned adviser to plan a program of studies.

An applicant to the program in School Administration or Supervision must meet the Board of Regents criteria for admission to graduate study, possess a regular Florida Rank III graduate certificate or equivalent, and have completed at least one year of successful teaching as a full-time teacher in an elementary or secondary school. (Service as an aide or substitute does not meet the experience requirement.)

In addition, the Division offers a number of advanced general courses, some of which are requirements of various masters degree programs offered by the School. Among these offerings are courses in Instructional Technology, Instructional Media, Analysis of Teaching, Educational Research, and Comparative and International Education.

### ADMINISTRATION: ELEMENTARY OR SECONDARY

DEGREE: *Master of Science*

| | *Quarter Hours* | |
|---|---|---|
| *Core Requirements* | | **16** |
| EDA 605 The Organization and Operation of Public School Systems | 4 | |
| EDA 608 Supervision in Education | 4 | |
| EDA 609 Curriculum Development | 4 | |
| EDU 507 Analysis & Application of Educational Research | 4 | |
| *Other Courses* | | **19-21** |

| | | |
|---|---|---|
| EDA 606 The Administration of an Elementary School | 4 | |
| *or* | | |
| EDA 607 The Administration of a Secondary School | | |
| EDA 616 Staff Development Programs in Urban School Systems | 4 | |
| EDA 617 Emerging Designs for School Organization and Staff Utilization | 4 | |
| EDA 695 Supervised Field Experience | 3-5 | |
| EEL 605 Curriculum Design for Childhood Education | 4 | |
| *or* | | |
| EDS 625 Secondary School Curriculum | | |
| *Electives:* from Education, School of Business and Organizational Sciences, or College of Arts & Sciences | | 8-10 |
| | | 45 |

**SUPERVISION: ELEMENTARY OR SECONDARY**

DEGREE: *Master of Science*

| | *Quarter Hours* | |
|---|---|---|
| *Core Requirements:* | | 16 |
| EDA 605 The Organization and Operation of Public School Systems | 4 | |
| EDA 608 Supervision in Education | 4 | |
| EDA 609 Curriculum Development | 4 | |
| EDU 507 Analysis & Application of Educational Research | 4 | |
| *Other Courses:* | | 19-21 |
| EDA 615 Curriculum Evaluation and Improvement in Urban School Systems | 4 | |
| EDA 616 Staff Development Programs in Urban School Systems | 4 | |
| EDA 617 Emerging Designs for School Organization & Staff Utilization | 4 | |
| EDA 695 Supervised Field Experience | 3-5 | |
| EEL 605 Curriculum Design for Childhood Education | | |
| *or* | | |
| EDS 625 Secondary School Curriculum | 4 | |
| *Electives:* from Education, School of Business and Organizational Sciences, or College of Arts & Sciences | | 8-10 |
| | | 45 |

# COURSE OFFERINGS

## GENERAL PROFESSIONAL EDUCATION

EDU 305 SCHOOLING IN AMERICA (5) (F,W,S,SS) Systematic analysis of the contemporary enterprise of schooling and development of demonstrated understanding of the nature of educational systems and the impact of political, legal, fiscal, and cultural issues upon these systems.

EDU 311 GENERAL TEACHING LABORATORY I — BASIC TEACHING SKILLS (5) (F,W,S,SS) Practice in generic teaching skills, techniques and strategies basic to all age levels and subject matter areas. Lecture, seminar and laboratory.

EDU 312 GENERAL TEACHING LABORATORY II — HUMAN RELATIONS SKILLS (5) (F,W,S,SS) Development of human relations skills to facilitate interaction and prepare students to deal with individuals and groups in a multi-ethnic urban classroom.

EDU 505 INSTRUCTIONAL TECHNOLOGY: SYSTEMS APPROACH (4) (F) Development of instructional competencies with an emphasis on the use of a systems approach in the design, implementation and evaluation of programs.

EDU 506 ANALYSIS OF TEACHING (4) (W) Examination of the research on instruction in teaching and the development of skills in systems of both observation and analysis of teacher behavior.

EDU 507 ANALYSIS AND APPLICATION OF EDUCATIONAL RESEARCH (4) (F,W,S,SS) Competencies required for the design, implementation, and evaluation of educational research, including problem formulation and analysis, sample selection, instrument selection, formulation of research design and procedure, and data analysis.

EDU 508 FIELD STUDY ABROAD (5-10) (ARR) Development of international and cross-cultural understandings of educational philosophies and systems through planned travel and study abroad.

EDU 509 NATIONAL EDUCATIONAL SYSTEMS: A COMPARATIVE ANALYSIS (4) (W) Examination of educational structures and guiding educational objectives in a limited number of both developed and developing countries. Analysis of the responses of national educational systems to common educational issues.

EDU 510 AFRICAN EDUCATIONAL SYSTEMS: A COMPARATIVE APPROACH (4) (S). Contemporary trends and issues of education in selected independent African countries with historical analysis of colonial educational policies and practices.

EDU 514 LATIN AMERICAN EDUCATION: AN HISTORICAL AND CONTEMPORARY OVERVIEW (4) (S) Historical and current development of Latin American education and analysis of the principal forces shaping this development.

EDU 515 INTERCULTURAL EDUCATION: NATIONAL AND INTERNATIONAL PERSPECTIVES (4) (F) Analysis of concepts and programs of intercultural and international education. Consideration of the role of education in fostering intercultural understanding both nationally and internationally.

EDU 516 INSTRUCTIONAL MEDIA (4) (W) Development of competencies required for effective selection and utilization of instructional media. Consideration of criteria for sources, selection, evaluation and methods of implementing media.

EDU 517 MEASUREMENT AND EVALUATION IN EDUCATION (4) (F) Competencies required for the design, construction or selection, and evaluation of measuring instruments.

EDU 518 AFFECTIVE LEARNING IN THE CLASSROOM (4) (S) A behavioral approach to affective teaching techniques, including theoretical background, behavioral definitions, writing affective objectives, and evaluation of affective learning in the classroom. A field experience will be included.

EDU 595 INDIVIDUAL STUDY (1-5) (ARR.) The student plans and carries out an independent study project under direction. For topics directly related to content of EDU courses. May not substitute for regular course offerings. Prerequisite: Written permission of the chairman of the division and then approval of the instructor.

EDU 605 RESEARCH METHODS IN EDUCATION: EXPERIMENTAL DESIGN AND ANALYSIS (5) (W) Competencies required for the design and analysis of complex educational problems, including formulation of pre-experimental, true experimental, quasi-experimental, and factorial designs, and related analyses. Prerequisite: EDU 507.

EDU 606 APPLICATION OF LEARNING THEORY TO INSTRUCTION (4) (W) Competencies required for analysis of learning theories of selected theorists and application of these theories to components of an instructional system.

## EDUCATIONAL ADMINISTRATION AND SUPERVISION

EDA 605 THE ORGANIZATION AND OPERATION OF PUBLIC SCHOOL SYSTEMS (4) (F,SS) Examines the public school system as a complex formal organization, identifying the dynamics of community-school interactions, goal clarification and program evaluation, procurement and allocation of resources, and the legal context within which the school system operates.

EDA 606 THE ADMINISTRATION OF AN ELEMENTARY SCHOOL (4) (F,S) Development of competencies required to assume the role of principal of an elementary school, with particular attention to the urban setting. Prerequisite: EDA 605.

EDA 607 THE ADMINISTRATION OF A SECONDARY SCHOOL (4) (F,S) Development of competencies required to assume the role of principal of a secondary school, with particular attention to the urban setting. Prerequisite: EDA 605.

EDA 608 SUPERVISION IN EDUCATION (4) (W,SS) Examines supervision as a process and the supervisory role in an educational setting, with particular attention to the development of supervision skills necessary to facilitate both individual and group change.

EDA 609 CURRICULUM DEVELOPMENT (4) (W,SS) Development of basic technical constructs of curriculum. Planning of reality-based educational programs at all levels of schooling.

EDA 615 CURRICULUM EVALUATION AND IMPROVEMENT IN URBAN SCHOOL SYSTEMS (4) (W,SS) Development of skills in curriculum evaluation and strategies for improvement of on-going curriculum. Prerequisite: EDA 609.

EDA 616 STAFF DEVELOPMENT PROGRAMS IN URBAN SCHOOL SYSTEMS (4) (F,SS) Identification and analysis of various staff training strategies and techniques used in an educational setting with an emphasis on defining staff problems and the processes by which such problems are solved.

EDA 617 EMERGING DESIGNS FOR SCHOOL ORGANIZATION AND STAFF UTILIZATION (4) (W,SS) Critical analysis of alternatives to traditional school organization and staffing and possible future alternatives in public education.

EDA 695 SUPERVISED FIELD EXPERIENCE (3-5) (F,W,S) Development of supervisory skills by undertaking an arranged field-based assignment. Prerequisites: The student must be in a master's degree program in educational administration or supervision at this university. Prerequisite: Completion of all required program courses.

EDA 696 SEMINAR IN SCHOOL ADMINISTRATION/SUPERVISION (3) (S) In-depth study of selected issues and developments in school administration and supervision, including an examination of related research.

EDA 697 WORKSHOP IN SCHOOL ADMINISTRATION/SUPERVISION (3-5) (ARR) Offers an opportunity for experienced school administrators and supervisors to participate in a problem-oriented workshop.

EDA 698 INDIVIDUAL STUDY IN SCHOOL ADMINISTRATION/SUPERVISION (1-5) (ARR.) For advanced students wishing to undertake an individual project directly related to school administration or supervision. May not substitute for regular course offerings. Prerequisites: (1) The student must be in a master's degree program in educational administration or supervision at this university, and (2) Written permission of the chairman of the division and then approval of the instructor.

# DIVISION OF CHILDHOOD EDUCATION

The Division offers programs at the bachelors and masters levels. All programs satisfy teacher certification standards of the State of Florida.

## UNDERGRADUATE PROGRAMS

A student enrolled in the Division may pursue a bachelors degree program in Elementary Education.

Students desiring certification in Early Childhood Education can do so by satisfying the area of concentration in Early Childhood Education.

A student majoring in the Division is, upon admission to the University, assigned an advisor who will assist the student in planning a program of study. The program of study must comply with the degree requirements of the University, and will reflect the career goals of the student. Upon completion of the program of study, the student is awarded a *Bachelor of Science* Degree, and qualifies for Rank III Certification in the State of Florida. The typical program of study is outlined below.

### STUDENT TEACHING AND LABORATORY EXPERIENCES

All undergraduate courses offered by the Division require a minimum of three (3) hours per week, per course, of observation and participation in designated schools. These experiences are a required segment of all courses.

The student teaching assignment is fulfilled in designated schools under the direction of classroom teachers and University faculty. This experience is on a full-time basis for a complete quarter. Permission will be contingent upon successful completion of all other requirements specified in the program of study. In general, the student is expected to enroll for student teaching in the senior year. Student teaching is *not* offered in the Summer quarter.

An application for student teaching may be obtained from the Office of Student Information and Academic Advising in the School of Education, and should be returned to that office early in the quarter following completion of 135 quarter hours of credit and no later than two quarters prior to the time of registration for student teaching.

## ELEMENTARY EDUCATION, GRADES 1-6

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* An *Associate of Arts* Degree or equivalent preparation in basic general education. A student must complete equivalents of the courses noted below. Otherwise they must be completed at the University.

MAS 401 *and* MAS 402
Art Skills
Music Skills
Two science courses selected from Biological and/or Physical Sciences.
Foundations of Education (see p. 142).

UPPER DIVISION PROGRAM

| | *Quarter Hours* |
|---|---|
| *Professional Education:* | **75** |
| EDU 305 Schooling in America | 5 |
| EDU 311 General Teaching Laboratory I | 5 |
| EDU 312 General Teaching Laboratory II | 5 |
| EEL 307 Health and Physical Education For Children | 5 |
| EEL 318 Experiencing Art In The Elementary School | 5 |
| EEL 319 Experiencing Music In The Elementary School | 5 |
| EEL 401 Communication Skills I | 5 |
| EEL 402 Communication Skills II | 5 |
| EEL 403 Communication Skills III | 5 |

| | | |
|---|---|---|
| EEL 411 Development Of Attitudes And Skills For Inquiry I | 5 | |
| EEL 413 Inquiry in Mathematics In The Elementary School | 5 | |
| EEL 414 Inquiry In Science In The Elementary school | 5 | |
| EEL 425 Student Teaching | 15 | |
| *Area of Concentration:* | | **15** |
| | | **90** |

Each Childhood Education major must complete a study program in an area of concentration consisting of at least 15 quarter hours to extend the student's background of information and understanding in an area of his or her choice. A wide variety of choices exists. The student should consult with his or her advisor for this information.

## GRADUATE PROGRAMS

Masters programs are offered in the areas of Elementary Education, Early Childhood Education, and Reading Education. The programs are designed to prepare professional educators for the role of master teacher and leadership roles in these areas.

Requirements for admission to programs in Childhood Education are: (1) completion of an appropriate undergraduate teacher education program, (2) satisfactory scholastic aptitude as determined by the Graduate Admission standards, and (3) for entry into the reading program, three years of teaching experience.

Upon completion of his or her program, the student is awarded the *Master of Science* degree and qualifies for Rank II certification in the State of Florida.

A student must file a program of study with his or her advisor. The program of study must comply with the general masters degree requirements and reflect the career goals of the student. A typical program of study consists of 45 quarter hours of course work. Generally, ten quarter hours of graduate study from another accredited college or university may be transferred if applicable to the student's program.

### ELEMENTARY EDUCATION

DEGREE: *Master of Science*

| | | *Quarter Hours* |
|---|---|---|
| *General Professional Education:* | | **12** |
| EEL 605 Curriculum Design For Childhood Education | 4 | |
| EDU 507 Analysis And Application Of Educational Research | 4 | |
| One course in sociology or psychology (consult advisor) | 4 | |
| *Area of Specialization:* | | **24** |
| EEL 606 Educational Programs For Older Children | 4 | |
| EEL 609 Instruction in Reading | 4 | |
| (Other courses to be selected from among EEL course listings) | 16 | |
| *Electives:* | | **9** |
| | | **45** |

### EARLY CHILDHOOD EDUCATION

DEGREE: *Master of Science*

| | | Quarter Hours |
|---|---|---|
| *General Professional Education:* | | 12 |
| EEL 605 Curriculum Design For Childhood Education | 4 | |
| EDU 507 Analysis & Application Of Educational Research | 4 | |
| One course in sociology or psychology (consult advisor) | 4 | |
| *Area of Specialization:* | | 24 |
| ECE 606 Education Programs For Younger Children | 4 | |
| ECE 609 Instruction in Reading | 4 | |
| (Other courses to be selected from ECE course listings) | 16 | |
| *Electives:* | | 9 |
| | | 45 |

### READING

DEGREE: *Master of Science*

| | | Quarter Hours |
|---|---|---|
| *General Professional Education:* | | 12 |
| EDU 507 Analysis And Application Of Educational Research | 4 | |
| EEL 605 Curriculum Design For Childhood Education | 4 | |
| EDU 517 Measurement And Evaluation In Education | 4 | |
| *Area of Specialization:* | | 29 |
| (Courses to be selected in consultation with your advisor) | | |
| *Electives:* | | 4 |
| | | 45 |

## COURSE OFFERINGS

*Note* — Each course requires a minimum of 3 hours per week in laboratory and field work.

EEL 307 HEALTH AND PHYSICAL EDUCATION FOR CHILDREN (5) (F,W,S,SS) Designed to provide competencies necessary for the development and implementation of programs concerning use of leisure time and maintenance of personal health and family life. Prerequisites: EDU 305, EDU 311, and EDU 312.

EEL 318 EXPERIENCING ART IN THE ELEMENTARY SCHOOL (5) (F,W,S,SS) Designed to provide the student with competencies necessary for the development and implementation of art experiences in the elementary curriculum. Prerequisites: EDU 305, EDU 311, EDU 312, Art skills or equivalent.

EEL 319 EXPERIENCING MUSIC IN THE ELEMENTARY SCHOOL (5) (F,W,S,SS) Designed to provide the student with competencies necessary for the development and implementation of music experiences in the elementary curriculum. Prerequisites: EDU 305, EDU 311, EDU 312, Music skills or MUE 375.

EEL 401 COMMUNICATION SKILLS I (5) (F,W,S,SS) Designed to develop and refine those teaching competencies which allow the student to perform effectively as a teacher of reading. Prerequisites: EDU 305, EDU 311, and EDU 312.

EEL 402 COMMUNICATION SKILLS II (5) (F,W,S,SS) Designed to develop and refine those teaching competencies which allow the student to perform effectively as a teacher of children using language arts activities to enhance communications skills. Prerequisite: EEL 401.

EEL 403 COMMUNICATION SKILLS III (5) (F,W,S,SS) Designed to implement and expand upon the teaching competencies of EEL 401 and EEL 402 in a classroom management practicum. Prerequisites: EEL 401 and EEL 402.

EEL 411 DEVELOPMENT OF ATTITUDES AND SKILL FOR INQUIRY I (5) (F,W,S,SS) Designed to develop and refine those teaching competencies which allow the student to perform effectively as a teacher of children using social studies as a mode of inquiry. Prerequisites: EDU 305, EDU 311 and EDU 312.

EEL 413 INQUIRY IN MATHEMATICS IN THE ELEMENTARY SCHOOL (5) (F,W,S,SS) Designed to develop and refine those teaching competencies which allow the student to perform effectively as a teacher of children using mathematics as a mode of inquiry. Prerequisites: EDU 305, EDU 311, EDU 312, MAS 401 and MAS 402 or equivalent.

EEL 414 INQUIRY IN SCIENCE IN THE ELEMENTARY SCHOOL (5) (F,W,S,SS) Designed to develop and refine those teaching competencies which allow the student to perform effectively as a teacher of children using science as a mode of inquiry. Prerequisites: EDU 305, EDU 311, and EDU 312.

EEL 425 STUDENT TEACHING (15) (F,W,S) A field experience in an elementary school where the student serves as a teacher associate, demonstrating competencies acquired throughout the program. Prerequisite: All EEL courses.

EEL 518 CHILDREN'S LITERATURE (5) (F) Designed to develop a critical analysis of the purposes, strategies and evaluative techniques of literature for children. Prerequisites: EEL 401, EEL 402.

EEL 525 DIAGNOSIS AND REMEDIATION IN MATHEMATICS (4) (F) Strategies for studying symptoms, causes and consequences for children in the teaching of elementary school Mathematics; supervised case study; theoretical models. Prerequisite: EEL 413.

EEL 605 CURRICULUM DESIGN FOR CHILDHOOD EDUCATION (4) (F,SS) A study of curriculum theory, construction and evaluation.

EEL 606 EDUCATIONAL PROGRAMS FOR OLDER CHILDREN (4) (W) Programs developed for older children; curriculum trends based on contemporary psychological, educational and sociological research.

ECE 401 EARLY CHILDHOOD EDUCATION PROGRAMS (5) (F,S) Philosophy and theories of early childhood education; physical, emotional, social and mental development. Observation and participation are required. Senior class status required.

ECE 402 CURRICULUM AND INSTRUCTION IN EARLY CHILDHOOD EDUCATION (5) (W,S) Practical considerations of basic principles, experiments, research and trends related to early childhood education; materials and techniques of teaching and working with parents. Observation and participation are required. Senior class status required.

ECE 403 TRENDS IN EARLY CHILDHOOD EDUCATION (5) (F,W) To develop an understanding of and the skills for dealing with critical issues; assessing the progress of contemporary programs locally and nationally; and recommending solutions for current problems.

ECE 606 EDUCATION PROGRAMS FOR YOUNGER CHILDREN (4) (W) Programs developed for young children; curriculum trends based on contemporary psychological, educational and sociological research.

ECE/EEL 595 INDIVIDUAL STUDY IN EARLY CHILDHOOD/ELEMENTARY EDUCATION (1-5) (F,W,S,SS) Individual investigation in the area of instruction. Permission of instructor.

ECE/EEL 607 INSTRUCTION IN SOCIAL LEARNING (4) (S) Refinement of skills related to program development, methods of teaching, selection of materials and review of research.

ECE/EEL 608 INSTRUCTION IN LANGUAGE ARTS (4) (W) Refinement of skills related to program development, methods of teaching, selection of materials and review of research.

ECE/EEL 609 INSTRUCTION IN READING (4) (F,SS) Refinement of skills related to program development, methods of teaching, selection of materials and review of research.

ECE/EEL 615 INSTRUCTION IN MATHEMATICS (4) (W,SS) Refinement of skills related to program development, methods of teaching, selection of materials and review of research.

ECE/EEL 616 INSTRUCTION IN SCIENCE (4) (F) Refinement of skills related to program development, methods of teaching, selection of materials and review of research.

ECE/EEL 617 INSTRUCTION IN MUSIC (4) (S) Refinement of skills related to program development, methods of teaching, selection of materials and review of research.

ECE/EEL 618 INSTRUCTION IN ART (4) (S) Refinement of skills related to program development, methods of teaching, selection of materials and review of research.

ECE/EEL 695 SUPERVISED FIELD EXPERIENCE IN EARLY CHILDHOOD/ELEMENTARY EDUCATION (5-15) (W,S) Field work in educational institutions and organizations.

ECE/EEL 696 SEMINAR IN EARLY CHILDHOOD/ELEMENTARY EDUCATION (3) (W) Advanced study of critical issues and problems in early childhood/elementary education.

ECE/EEL 697 WORKSHOP IN EARLY CHILDHOOD/ELEMENTARY EDUCATION (3-5) An opportunity for teachers to continue to develop competency in a specified area under the guidance of a specialist in selected fields.

ERE 503 ANALYSIS AND PRODUCTION READING MATERIALS (5) (S) Exploration, creation and evaluation of basic reading materials; commercial and non-commercial. Prerequisite: EEL 401 or equivalent.

ERE 601 DIAGNOSIS OF READING DIFFICULTY (5) (F) Technique for analyzing and clarifying reading difficulties. Prerequisite: EEL 401 or its equivalent. Permission of instructor.

ERE 602 PROGRAMS OF REMEDIATION IN READING (5) (W) A course demonstrating corrective and remedial procedures; application of specific psychological, pedagogical, and psychotherapeutic techniques. Prerequisites: EEL 401 and ERE 601 or their equivalents. Permission of instructor.

ERE 606 TEACHING READING IN THE SECONDARY SCHOOL (4) (W) Development of skills necessary to identify reading problems in the classroom. Emphasis on how to use reading inventories and diagnostic tests as well as material and techniques for teaching reading skills and assisting students to overcome reading deficiencies. Special attention to reading problems of students in the specific subject areas. Prerequisite: one course in reading.

ERE 625 RESEARCH IN READING (4) (W) A course to study significant research in reading; research methodology; planning and research in reading. Permission from instructor required.

ERE 626 PRACTICUM IN READING (4) (S) An analysis of reading difficulties through various teaching techniques and programs.

ERE 628 ORGANIZATION AND SUPERVISION OF READING PROGRAM (4) (F) The organization and supervision of reading programs; problems of organization and supervision; continuity of school wide programs; emphasis on leadership responsibilities.

ERE 629 CLINICAL PROCEDURES IN READING (4) (SS) Supervised experience, resulting in diagnosis, prescription and evaluation of particular children in a clinical setting.

# DIVISION OF SECONDARY EDUCATION

The Division offers bachelors degree programs for the preparation of teachers for teaching in secondary schools, art and music in grades 1-12, and masters degree programs designed for the continued professional development of teachers.

Unlike traditional programs in secondary education, which emphasize course completion as a sufficient condition for awarding a degree, the programs of the Division emphasize demonstrated performance in specific teaching skills as the main criterion for awarding a degree.

## UNDERGRADUATE PROGRAMS

A student enrolled in the Division may pursue the following programs:

*General: Grades 1-12*
Art Education
Music Education

*Secondary Education: Grades 7-12*
Biology Education
Chemistry Education
English Education
History Education
Mathematics Education
Modern Language Education
Physics Education
Social Studies Education

A student majoring in the Division is, after being admitted to the University, assigned an advisor in his or her teaching field who will assist the student in constructing a program of study. The program of study must comply with the University's degree requirements and reflect the career goals of the student. Upon completion of the program of study, the student is awarded a *Bachelor of Science* degree with a major in a specific subject matter area, and qualifies for the appropriate Rank III Certification in the State of Florida.

### STUDENT TEACHING AND LABORATORY EXPERIENCES

Most courses offered by this Division require observation and participation in selected schools. These experiences are a required segment of certain courses and are identified in each course description.

The student teaching assignment is fulfilled in designated field centers under the direction of classroom teachers and University faculty. This experience is on a full-time basis for a complete quarter. Permission to student teach will be contingent upon completion of all other requirements specified in the program of study. The student is expected to student teach during the Winter or Spring Quarter of the senior year. There is no student teaching in the Summer Quarter.

Application for student teaching is the responsibility of the student. Necessary forms may be obtained from the Office of Student Information and Academic Advising in the School of Education, and should be returned to that office early in the quarter following completion of 135 quarter hours of credit and no later than two quarters prior to the time of registration for student teaching.

### ART EDUCATION: GRADES 1-12

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* 1) An *Associate of Arts* degree in art, *or* (a) Art History Survey (6 semester hours) and (b) Basic and Figure Drawing (6 semester hours) and (c) Two and Three Dimensional Design (6 semester hours) and 2) Foundations of Education (10 quarter hours). If foundations requirements are not met at the lower division, they must be taken in addition to the 90 quarter hours required in the Student's Upper Division Program.

UPPER DIVISION PROGRAM;

| | Quarter Hours | |
|---|---|---|
| *Subject Matter Specialization:* | | **45** |
| ARH 475 Contemporary Art, Art History Elective | 5 | |
| FIA 316 Figure Drawing | 5 | |
| FIA 325 Painting | 5 | |
| FIA 335 Sculpture | 5 | |
| FIA 337 Jewelry and Metals | 5 | |
| FIA 345 Printmaking | 5 | |
| FIA 355 Photography | 5 | |
| FIA 361 Ceramics | 5 | |
| Art Elective | 5 | |
| *Professional Education* | | **45** |
| EDU 305 Schooling in America K-14 | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| *Reading Requirement* | | |
| EDS 401 Special Teaching Laboratory; Reading | 5 | |
| *Special Methods and Student Teaching:* | | |
| A student must complete the 10 quarter hours of foundations courses, and all core courses before enrolling in 400 level special methods courses. | | |
| EAR 405 and EAR 416 Must be taken before EAR 425. | | |
| EAR 405 Special Teaching Laboratory: Art in Grades K-6 | 5 | |
| (minimum prerequisite or corequisite of 30 hours required in subject matter specialization) | | |
| EAR 416 Special Teaching Laboratory: Art in Grades 7-12 | 5 | |
| (minimum prerequisite or corequisite of 30 hours required in subject matter specialization) | | |
| EAR 425 Student Teaching in Art | 15 | |
| *NOTE:* The student should consult his or her advisor about the requirements for reading. | | |
| *Electives:* | | **5** |
| Sufficient number of hours to make a total of 90 quarter hours at Florida International. | | |
| | | **90** |

## MUSIC EDUCATION: GRADES 1-12

DEGREE: *Bachelor of Science*

*LOWER DIVISION PREPARATION*

*Required Courses:* An Associate of Arts degree in Music or the following recommended courses: applied, 12 quarter hours; history, 6 quarter hours; organizations, 6 quarter hours; techniques secondary instruments, 6 quarter hours; theory, 18 quarter hours; sight-singing, 6 quarter hours; Foundations in Education, 10 quarter hours. If Foundations in Education requirements are not met at the lower division, they must be taken in addition to the 90 quarter hours required in the student's upper division program.

UPPER DIVISION PROGRAM

| | Quarter Hours | |
|---|---|---|
| *Subject Matter Specialization:* | | **41** |
| Applied Music (Five quarters; ½ hour lessons on major instrument each quarter) | 5 | |
| Conducting | 1 | |

| | | |
|---|---|---|
| Guitar | 2 | |
| Music History | 5 | |
| Music Theory | 15 | |
| Organizations | 10 | |
| *Professional Education:* | | 45 |
| EDU 305 Schooling in America K-14 | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| *Reading Requirement:* | | |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| *Special Methods and Student Teaching:* | | |
| A student must complete the 10 quarter hours of foundations courses and all core courses before enrolling in 400 level special methods courses. A student must enroll for EMU 406 and EMU 425 in consecutive quarters. | | |
| EMU 305 Special Teaching Laboratory I (music) | 5 | |
| EMU 406 Special Teaching Laboratory II (music) (minimum prerequisite or corequisite of 30 hours required in subject matter specialization) | 5 | |
| EMU 425 Student Teaching (Elementary & Secondary) | 15 | |
| *Electives:* | | 4 |
| Sufficient number of hours to make a total of 90 quarter hours at Florida International. | | |
| | | 90 |

**BIOLOGY EDUCATION: GRADES 7-12**

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* 12 quarter hours (8 semester hours) of biology; 12 quarter hours (8 semester hours) of general chemistry; 12 quarter hours (8 semester hours) of general physics; mathematics through analytical geometry; and Foundations of Education (10 quarter hours). If foundations requirements are not met at the lower division, they must be taken in addition to the 90 quarter hours required in the students upper division program.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Subject Matter Specialization:* | | 46 |
| Genetics | 5 | |
| Biochemistry | 7 | |
| Molecular Biology | 7 | |
| Developmental Biology | 5 | |
| Electives in Biology* | 10 | |
| Organic Chemistry | 7 | |
| Quantitative Analysis | 5 | |
| *Professional Education:* | | 40 |
| EDU 305 Schooling in America K-14 | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| *Reading Requirement:* | | |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| *Special Methods and Student Teaching:* | | |
| A student must complete ten (10) quarter hours of foundations courses and all core courses before enrolling in 400 level special methods courses. A student must enroll for EDS 408 and EDS 425 in consecutive quarters. | | |
| EDS 408 Special Teaching Laboratory: Science (minimum prerequisite or corequisite of 30 hours required in subject matter specialization) | 5 | |

| | | |
|---|---|---|
| EDS 425 Student Teaching | 15 | |
| *Electives:* | | **4** |
| Sufficient number of hours to make a total of 90 quarter hours at Florida International. | | |
| | | **90** |

*BSC 300, 305, 306, 308, 364, 374, 380, and 480 are not applicable to this requirement.

## CHEMISTRY EDUCATION: GRADES 7-12

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* 12 quarter hours (8 semester hours) of general chemistry; 12 quarter hours (8 semester hours) of general physics, mathematics through calculus 1 and Foundations of Education (10 quarter hours) (see p. 142). If foundations requirements are not met at the lower division, they must be taken in addition to the 90 quarter hours required in the student's upper division program.

*Recommended Courses:* Organic Chemistry

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Subject Matter Specialization* | | **36-38** |
| Organic Chemistry I and II | 10 | |
| Organic Chemistry Laboratories | 4 | |
| Quantitative Analysis and Laboratories | 5 | |
| Physical Chemistry and Laboratory | 7 | |
| Electives in Chemistry | 5-7 | |
| Calculus II | 5 | |
| *Professional Education:* | | **40** |
| EDU 305 Schooling in America K-14 | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| *Reading Requirement:* | | |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| *Special Methods and Student Teaching:* | | |
| A student must complete ten (10) quarter hours of foundations courses and all core courses before enrolling in 400 level special methods courses. A student must enroll for EDS 408 and EDS 425 in consecutive quarters. | | |
| EDS 408 Special Teaching Laboratory: Science (minimum prerequisite or corequisite of 25 hours required in subject matter specialization) | 5 | |
| EDS 425 Student Teaching | 15 | |
| *Electives:* | | **12-14** |
| Sufficient number of hours to make a total of 90 quarter hours at Florida International. | | |
| | | **90** |

## ENGLISH EDUCATION: GRADES 7-12

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* two courses in freshman English, two courses beyond freshman English in literature, one course in oral interpretation, and one course in advanced composition. (If the required courses beyond freshman composition are not completed they will be included in the student's program in addition to regular upper division requirements). Foundations of Education (10 quarter hours). If foundations requirements are not met at the lower division, they must be taken in addition to the 90 quarter hours required in the student's upper division program.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Subject Matter Specialization:* | | **45** |
| 1. Communications: | 10 | |
| ENG 311 | | |
| ENG 313 | | |
| ENG 415 | | |
| ENG 416 | | |
| 2. Linguistics: | 10 | |
| ENG 320 Introductory Linguistics | | |
| ENG 552 Modern Grammars (prerequisite ENG 320) | | |
| ENG 553 History of the English Language (prerequisite ENG 320) | | |
| 3. Literature | 15-20 | |
| *Professional Education:* | | **40** |
| EDU 305 Schooling in America K-14 | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| *Reading Requirement:* | | |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| *Special Methods and Student Teaching:* | | |
| A student must complete ten (10) quarter hours of foundations courses and all core courses before enrolling in 400 level special methods courses. A student must enroll for EDS 405 and EDS 425 in consecutive quarters. | | |
| EDS 405 Special Teaching Laboratory: English (minimum prerequisite or corequisite of 30 hours required in subject matter specialization) | 5 | |
| EDS 425 Student Teaching | 15 | |
| *Electives:* | | **5** |
| Sufficient number of hours to make a total of 90 quarter hours at Florida International. | | |
| | | **90** |

## HISTORY EDUCATION: GRADES 7-12

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* Foundations of Education (10 quarter hours). If foundations requirements are not met at the lower division, they must be taken in addition to the 90 quarter hours required in the student's upper division program.

*Remarks:* 9 quarter hours (6 semester hours) beyond the freshman social science core may be transferred from the lower division toward satisfying requirements of items three and four under subject-matter specialization below.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Subject Matter Specialization:* | | **40** |
| 1. History 301 Introduction to History | 5 | |
| 2. U.S. History at 300, 400, or 500 level | 10 | |
| 3. History other than U.S. | 20 | |
| 4. U.S. Government (Political Science Dept.) | 5 | |
| *Professional Education:* | | **15** |
| EDU 305 Schooling in America K-14 | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| *Reading Requirement:* | | **5** |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |

| | | |
|---|---|---|
| *Special Methods and Student Teaching:* | | **20** |
| A student must complete the 10 hours of foundations courses and all core courses (EDU 305, 311, and 312) before enrolling in EDS 409. A student must enroll for EDS 409 and EDS 425 in consecutive quarters, either a fall-winter or a winter-spring quarter sequence. | | |
| EDS 409 Special Teaching Laboratory: Social Studies | 5 | |
| EDS 425 Student Teaching | 15 | |
| *Electives:* | | **15** |
| Sufficient number of hours to make a total of 90 quarter hours at Florida International. | | |
| | | **90** |

## MATHEMATICS EDUCATION: GRADES 7-12

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* Trigonometry, analytic geometry, calculus (at least one term). Foundations of Education (10 quarter hours) . If foundations requirements are not met at the lower division, they must be taken in addition to the 90 quarter hours required in the student's upper division program.

UPPER DIVISION PROGRAM:

| | | *Quarter Hours* |
|---|---|---|
| *Subject Matter Specialization:* | | **35** |
| 35 quarter hours beyond calculus, including at least 10 quarter hours in probability and statistics | | |
| *Professional Education:* | | **40** |
| EDU 305 Schooling in America K-14 | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| *Reading Requirement:* | | |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| *Special Methods and Student Teaching:* | | |
| A student must complete ten (10) quarter hours of foundations courses and all core courses before enrolling in 400 level special methods courses. A student must enroll for EDS 406 and EDS 425 in consecutive quarters. | | |
| EDS 406 Special Teaching Laboratory: Mathematics (minimum prerequisite or corequisite of 30 hours required in subject matter specialization) | 5 | |
| EDS 425 Student Teaching | 15 | |
| *Electives:* | | **15** |
| Sufficient number of hours to make a total of 90 quarter hours at Florida International. | | |
| | | **90** |

## MODERN LANGUAGE EDUCATION: GRADES 7-12

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* Four semesters of elementary and intermediate modern language and Foundations of Education (10 quarter hours). If foundations requirements are not met at the lower division they must be taken in addition to the 90 quarter hours required in the student's upper division program.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| | | 30 |
| *Subject Matter Specialization:* | | 10 |
| Phonetics in Target Language | 5 | |
| Contrastive Structures (English-Target Language) | 5 | |
| Culture and Civilization | 5-10 | |
| Conversation Course (For non-native speakers) | 5 | |
| Literature in Target Language | 10 | |
| *Professional Education:* | | 40 |
| EDU 305 Schooling in America K-14 | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| *Reading Requirement:* | | |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| *Special Methods and Student Teaching:* | | |
| A student must complete the 10 quarter hours of foundations courses, and all core courses before enrolling in 400 level special methods courses. A student must enroll for EDS 407 and EDS 425 in consecutive quarters. | | |
| EDS 407 Special Teaching Laboratory: Modern Languages (minimum prerequisite or corequisite of 20 hours required in subject matter specialization). | 5 | |
| EDS 425 Student Teaching | 15 | |
| *Electives:* | | 20 |
| Sufficient number of hours to make a total of 90 quarter hours at Florida International. | | |
| | | 90 |

## PHYSICS EDUCATION: GRADES 7-12

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* 12 quarter hours of general physics; 12 quarter hours (8 semester hours) of general chemistry; mathematics through calculus II, and Foundations of Education (10 quarter hours). If foundations requirements are not met at the lower division, they must be taken in addition to the 90 quarter hours required in the student's upper division program.

*Remarks:* Linear algebra, a prerequisite for multi-variable calculus (section 1 below) may be taken at the lower division or at Florida International.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Subject Matter Specialization:* | | 41 |
| Physics 301, 302, 303 | 15 | |
| Junior Physics Laboratory 301L-303L | 6 | |
| Modern Physics | 10 | |
| Electives in Physics | 5 | |
| Multivariate Calculus | 5 | |
| *Professional Education:* | | 40 |
| EDU 305 Schooling in America K-14 | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| *Reading Requirement:* | | |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| *Special Methods and Student Teaching:* | | |
| A student must complete ten (10) quarter hours of foundations courses and all core courses before enrolling in 400 level special methods | | |

courses. A student must enroll for EDS 408 and EDS 425 in consecutive quarters.

EDS 408 Special Teaching Laboratory: Science (minimum prerequisite or corequisite of 25 hours required in subject matter specialization) 5

EDS 425 Student Teaching 15

*Electives:* **9**

Sufficient number of hours to make a total of 90 quarter hours at Florida International.

**90**

## SOCIAL STUDIES EDUCATION: GRADES 7-12

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* 1) Two courses in history. 2) One course in the social sciences beyond freshman social science core (select from anthropology, economics, geography, political science or sociology). 3) Foundations of Education (10 quarter hours). If foundations requirements are not met at the lower division, they must be taken in addition to the 90 quarter hours required in the student's upper division program.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Subject Matter Specialization:* | | **30** |
| History | 10 | |
| Political Science | 5 | |
| Geography (International Relations Dept.) | 5 | |
| Anthropology, Economics or Sociology | 10 | |
| *Professional Education:* | | **15** |
| EDU 305 Schooling in America K-14 | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| *Reading Requirement:* | | **5** |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| *Special Methods and Student Teaching:* | | **20** |
| A student must complete the 10 hours of foundations courses, and all core courses (EDU 305, 311 and 312) before enrolling in EDS 409. A student must enroll for EDS 409 and EDS 425 in consecutive quarters, either a fall-winter or a winter-spring quarter sequence. | | |
| EDS 409 Special Teaching Laboratory: Social Studies | 5 | |
| EDS 425 Student Teaching | 15 | |
| *Electives:* | | **20** |
| Electives must include sufficient quarter hours in United States History, history other than United States, political science, economics, geography, anthropology and sociology to meet social studies certification requirements. A minimum of 65 quarter hours at the lower and upper divisions combined must be completed in the social studies subject matter specialization for certification. *The student must consult with the social studies advisor about these requirements.* | | |
| | | **90** |

# GRADUATE PROGRAMS

Masters programs are offered by the Division in the following specialized areas:

| | |
|---|---|
| Art Education | Music Education |
| English Education | Science Education |
| Mathematics Education | Social Studies Education |

A student must file a program of study with his or her advisor. The program of study must comply with the general masters degree requirements and reflect the career goals of the student.

Upon completion of his program, the student is awarded the Master of Science degree and qualifies for Rank II Certification in the State of Florida.

Requirements for admission to programs in Secondary Education are: (1) completion of an appropriate undergraduate teacher education program, (2) satisfactory scholastic aptitude as determined by the Graduate Admission standards, (3) evidence of satisfactory record in the teaching field, and (4) three letters of recommendation and a written autobiography.

A typical program of study consists of 45 quarter hours of course work. Generally, ten quarter hours of graduate study from another accredited college or university may be transferred if applicable to the student's program.

## ART EDUCATION

DEGREE: *Master of Science*

| | *Quarter Hours* | |
|---|---|---|
| *Education, including Art Education:* | | **29** |
| These courses to be taken in the following sequence: | | |
| 1. EDU 505 Instructional Technology | 4 | |
| 2. EAR 605 Curriculum and Instruction in Art | 4 | |
| 3. Select one of following, depending on individual professional orientation: | 4 | |
| EDU 506 Analysis of Teaching | | |
| EDA 605 The Organization and Operation of Public School Systems | | |
| EDA 608 Supervision in Education | | |
| EEL 605 Curriculum Design for Childhood Education | | |
| EDS 625 Secondary School Curriculum | | |
| EEC 608 Exceptional Children and Youth | | |
| 4. EAR 607 Organization and Coordination of School and Community Art Programs | 4 | |
| 5. EDU 507 Analysis and Application of Educational Research | 4 | |
| 6. EAR 609 Seminar in Art Education: Contemporary Issues and Research | 4 | |
| 7. EDS 401 Special Teaching Laboratory: Reading (nonsequential) | 5 | |
| *Subject Matter Specialization:* | | **21** |
| Five graduate art courses, including one art history: | | |
| Art History (5) | | |
| Studio Art (16) | | |
| (4 quarter hours credit for each studio course) | | |
| *Electives:* | | **4** |
| | **(Minimum)** | **54** |

## ENGLISH EDUCATION

DEGREE: *Master of Science*

| | *Quarter Hours* | |
|---|---|---|
| *Education:* | | **21** |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| EDU 507* Analysis and Application of Educational Research | 4 | |

| | | |
|---|---|---|
| EDS 614* Teaching English in the Secondary School | 4 | |
| EDS 625 Secondary School Curriculum | 4 | |
| EDS 639 Seminar in English Education | 4 | |
| *These courses to be taken in sequence | | |
| *Teaching Field:* English | | **20** |
| *Electives:* | | **9** |
| | | **45** |

## MATHEMATICS EDUCATION

DEGREE: *Master of Science*

| | *Quarter Hours* | |
|---|---|---|
| *Education:* | | **21** |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| EDU 507 Analysis and Application of Educational Research | 4 | |
| EDS 609 Teaching Mathematics In the Secondary School | 4 | |
| EDS 616 Seminar in Mathematics Education | 4 | |
| EDS 625 Secondary School Curriculum | 4 | |
| *Teaching Field:* Mathematics | | **20** |
| *Electives:* In Education and/or Mathematics | | **4** |
| | | **45** |

## MUSIC EDUCATION

DEGREE: *Master of Science*

| | *Quarter Hours* | |
|---|---|---|
| *Education:* | | **25** |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| EDU 505* Instructional Technology | 4 | |
| *or* | | |
| EDU 506* Analysis of Teaching | | |
| *Select one of the above.* | | |
| EDS 625 Secondary School Curriculum | 4 | |
| *or* | | |
| EEL 605 Curriculum Design for Childhood Education | | |
| *Select one of the above.* | | |
| EDU 507 Analysis and Application of Educational Research | 4 | |
| EMU 616 Methodology of Music Teaching | 4 | |
| EMU 617 Seminar in Music Education | 4 | |
| *EDU 505 and EDU 506 should be taken before other Education courses. | | |
| *Teaching Field:* Courses in music including | | **20** |
| MUS 517 Twentieth Century Music | 4 | |
| MUS 526 Arranging | 4 | |
| MUS 534 Advanced Conducting | 2 | |
| *Electives:* | | **5** |
| | | **45** |

## SCIENCE EDUCATION

DEGREE: *Master of Science*

| | *Quarter Hours* | |
|---|---|---|
| *Education:* | | **21** |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| EDU 507 Analysis and Application of Educational Research | 4 | |
| EDS 617 Teaching Science In the Secondary School | 4 | |

| | | |
|---|---|---|
| EDS 625 Secondary School Curriculum | 4 | |
| EDS 649 Seminar in Science Education | 4 | |
| *Teaching Field:* | | 20 |
| Biology or Chemistry or Physics | | |
| *or* | | |
| One Course in Each of the Following Areas | | |
| Biology, Chemistry, Physics | | |
| (For Junior High Science Teachers) | | |
| *Electives:* | | 4 |
| | | 45 |

### SOCIAL STUDIES EDUCATION

DEGREE: *Master of Science*

| | *Quarter Hours* | |
|---|---|---|
| *Education:* | | 21 |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| EDS 619 Teaching Social Studies in the Secondary School | 4 | |
| EDS 625 Secondary School Curriculum | 4 | |
| EDU 507 Analysis and Application of Educational Research | 4 | |
| EDS 629 Seminar in Social Studies Education | 4 | |
| *Teaching Field:* Social Studies | | 20 |
| *Electives:* In Education and/or Teaching Field | | 9 |
| | | 45 |

## COURSE OFFERINGS

### ART EDUCATION

EAR 405 SPECIAL TEACHING LABORATORY: ART IN GRADES K-6 (5) (F,S) Development of instructional skills, techniques, and strategies for teaching art in the elementary school. Laboratory and field participation required. Prerequisites: EDU 305, EDU 311, EDU 312. Minimum prerequisite or corequisite of 30 hours required in subject matter specialization.

EAR 416 SPECIAL TEACHING LABORATORY: ART IN GRADES 7-12 (5) (F,W) Development of instructional skills, techniques and strategies for teaching art in the junior and senior high school. Laboratory and field participation required. Prerequisites: EDU 305, EDU 311, EDU 312, EAR 405. Minimum prerequisite or corequisite of 30 hours required in subject matter specialization.

EAR 425 STUDENT TEACHING IN ART (15) (W,S) Supervised teaching in an elementary and secondary school. Prerequisites: EDU 305, EDU 311, EDU 312, EDS 401, EAR 405, EAR 416, and 30 quarter hours of the course work required in Art.

EAR 505 ART FOR THE EXCEPTIONAL CHILD (5) (W,SS) Development of appropriate instructional art skills, techniques, and strategies as related to the exceptional child. Observation and field participation required.

EAR 595 DIRECTED STUDY IN ART EDUCATION (1-5) Individual investigation and research in one or more areas of art education. Prerequisite: consent of professor.

EAR 605 CURRICULUM AND INSTRUCTION IN ART (4) (W) Examination of theoretical bases of curriculum development in art education. Analysis of objectives, content, methods and materials for art instruction in the elementary, junior and senior high school. Prerequisite: EDU 505.

EAR 607 ORGANIZATION AND COORDINATION OF SCHOOL AND COMMUNITY ART PROGRAMS (4) (F,SS) Procedures for the organization, coordination and evaluation of school, community, and in-service art programs, with particular attention to the urban multi-cultural setting.

EAR 609 SEMINAR IN ART EDUCATION: CONTEMPORARY ISSUES AND RESEARCH (4) (S) Examination of current issues and review of research in art education literature. Delineation and application of individual research problem. Prerequisite: EDU 507.

EAR 697 WORKSHOP IN ART EDUCATION (3-5) Production and application of materials and techniques in art education in a laboratory or field setting.

### MUSIC EDUCATION

EMU 305 SPECIAL TEACHING LABORATORY I (5) (W,SS) Development of instructional skills, techniques, and strategies for school music performance organizations through laboratory and field experiences. Prerequisites: EDU 305, 311, 312.

EMU 406 SPECIAL TEACHING LABORATORY II (5) (F,W) Field-based methods, materials and instructional skills course which prepares students for internship in an elementary and secondary school setting. Prerequisites: EDU 305, 311, 312 and EMU 305. Minimum prerequisite or corequisite of 30 hours required in subject matter specialization.

EMU 425 STUDENT TEACHING (15) (W,S) Supervised teaching in an elementary school (5 weeks) and a secondary school (5 weeks). Prerequisites: EDU 305, EDU 311, EDU 312, EMU 305, EDS 401, EMU 406 and 30 quarter hours of the coursework required in music.

EMU 595 DIRECTED STUDY IN MUSIC EDUCATION (1-5) (ARR) Individual investigation in one or more areas of music education.

EMU 616 METHODOLOGY OF MUSIC TEACHING (4) (W,SS) Analysis of methods, programs and materials for teaching music in the public schools, ad development of music pedegogy skills.

EMU 617 SEMINAR IN MUSIC EDUCATION (4) (F,S) Seminar in music programs in the United States and foreign countries, and current issues and problems facing the music educator.

EMU 697 WORKSHOP IN MUSIC EDUCATION (1-5) (ARR) Applications of materials and techniques in music education in a laboratory or field setting.

## SECONDARY EDUCATION: GRADES 7-12

EDS 401 SPECIAL TEACHING LABORATORY: READING (5) (F,W,S) Development of instructional skills, techniques, and strategies for teaching reading in the junior and senior high school. Attention to attaining competence in subject-matter related reading skills.

EDS 405 SPECIAL TEACHING LABORATORY: ENGLISH (5) (F,W) Development of instructional skills, techniques, and strategies for teaching English in the junior and senior high school. Prerequisites: EDS 305, EDU 311, and EDU 312. Field experience required. Minimum prerequisite or corequisite of 30 hours in subject matter specialization.

EDS 406 SPECIAL TEACHING LABORATORY: MATHEMATICS (5) (W) Development of instructional skills, techniques, and strategies for teaching mathematics in the junior and senior high school. Prerequisites: EDU 305, EDU 311, and EDU 312. Field experience required. Minimum prerequisite or corequisite of 25 hours in subject matter specialization.

EDS 407 SPECIAL TEACHING LABORATORY: MODERN LANGUAGES (5) (F,W) Development of instructional skills, techniques, and strategies for teaching modern languages in the junior and senior high school. Prerequisites: EDU 305, EDU 311, and EDU 312. Field experience required. Minimum prerequisite or corequisite of 20 hours in subject matter specialization.

EDS 408 SPECIAL TEACHING LABORATORY: SCIENCE (5) (W) Development of instructional skills, techniques, and strategies for teaching biological and physical sciences in the junior and senior high schools. Prerequisites: EDU 305, EDU 311, and EDU 312. Field experience required. Minimum prerequisite or corequisite of 25-30 hours in subject matter specialization.

EDS 409 SPECIAL TEACHING LABORATORY: SOCIAL STUDIES (5) (F,W) Development of instructional skills, techniques, and strategies for teaching history and social science in the junior and senior high school. Prerequisites: EDU 305, EDU 311, and EDU 312. (Field experience required.)

EDS 417 EXPERIENCING ADOLESCENT LITERATURE IN THE JUNIOR-SENIOR HIGH SCHOOL (4) (S) An examination of the most familiar types of literature found in the secondary school English Curriculum today, and the development of strategies for organizing and providing a variety of literary experiences for students who differ in intellectual abilities and literary tastes.

EDS 425 STUDENT TEACHING (15) (W,S) Supervised teaching in a junior or senior high school. Prerequisites: EDU 305, EDU 311, EDU 312, EDS 401 appropriate Special Teaching Laboratory, and appropriate number of hours in subject matter specialization.

EDS 595 INDIVIDUAL STUDY (1-5) (ARR) The student plans and carries out an independent study project under direction. Prerequisites: Consent of chairman of the division.

EDS 609 TEACHING MATHEMATICS IN THE SECONDARY SCHOOL (4) (F) Analysis of methods, programs, and materials for teaching mathematics in the junior and senior high school and development of teaching skills.

EDS 614 TEACHING ENGLISH IN THE SECONDARY SCHOOL (4) (F) Analysis of methods, programs and materials for teaching English in the junior and senior high school and development of teaching skills.

EDS 616 SEMINAR IN MATHEMATICS EDUCATION (4) (S) Designed to provide the advanced student with deeper understanding of the current state of Mathematics Education. Major emphasis on current trends and curriculum projects on the national and international levels, as well as evaluation and research related to these trends.

EDS 617 TEACHING SCIENCE IN THE SECONDARY SCHOOL (4) (F) Analysis of methods, programs and materials for teaching science in the junior and senior high school and development of teaching skills.

EDS 619 TEACHING SOCIAL STUDIES IN THE SECONDARY SCHOOL (4) (F) Analysis of methods, programs, and materials for teaching social studies in the junior and senior high school and development of teaching skills.

EDS 625 SECONDARY SCHOOL CURRICULUM (4) (W,SS) Examination of programs, trends, and developments in curriculum and instruction in the secondary school. Consideration and evaluation of innovations.

EDS 628 RESEARCH IN SECONDARY EDUCATION (1-4) (ARR) Examination and evaluation of research studies in secondary education. Prerequisite: At least one course in research methods or equivalent competency. Determination of equivalent competency will be made by the instructor.

EDS 629 SEMINAR IN SOCIAL STUDIES EDUCATION (4) (S) Designed for advanced students, the readings and discussions will focus on policy issues and recent research in social studies education. Though primarily for experienced social studies teachers and supervisors, the course is open to administrators and others with the consent of the instructor.

EDS 639 SEMINAR IN ENGLISH EDUCATION (4) (S) Designed for advanced students, the readings and discussions will focus on policy issues and recent research in English education. Though primarily for experienced English teachers and supervisors, the course is open to administrators and others with the consent of the instructor.

EDS 649 SEMINAR IN SCIENCE EDUCATION (4) (S) Analysis of research trends and selected topics in Science Education. Mainly for graduate students in secondary Science Education. Individual needs and interests will determine the fine structure of the course content.

EDS 695 SUPERVISED FIELD EXPERIENCE (5-15) (ARR) Field work in an educational institution or organization. Prerequisite: consent of chairman of the division.

EDS 696 SEMINAR IN SECONDARY EDUCATION (1-4) (ARR) Analysis of selected problems in secondary education.

EDS 697 WORKSHOP IN SECONDARY EDUCATION (3-5) (ARR) Production and application of materials and techniques in a laboratory or field setting. Prerequisite: consent of instructor.

# DIVISION OF PSYCHO-EDUCATIONAL SERVICES

Programs sponsored by the Division train specialists to help individuals experiencing academic or social adjustment problems in the schools. Competency domains are specified for teachers of exceptional children, for consultant or diagnostic teachers, for counselors and school psychologists. The context is one of preparing students for practice in the urban environment. Students are helped to integrate theory and research from the social and behavioral sciences and to develop the capability for identification with people of diverse cultural and racial heritage.

## UNDERGRADUATE PROGRAMS

The undergraduate special education program emphasizes the development of competencies in diagnosing learning and behavior problems, and prescribing and implementing an appropriate curriculum for exceptional children and youth. The trainee is prepared to conduct total classroom experiences for exceptional children, and, in addition, to reintegrate into the mainstream of education those students who are able to function full or part-time in the regular classroom. Programs have been planned to meet the requirements of Florida for *Rank III* certification in each of the following areas of specialization: Mental Retardation, Emotional Disturbance, and Specific Learning Disabilities. A student may elect a major in any one of the three areas.

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* An associate of arts degree or equivalent. Students must have the equivalent of the courses noted below or complete them at the university.

(a) MAS 401 and MAS 402

(b) Foundations of Education (See p. 142)

UPPER DIVISION PROGRAM:

| | *Quarter Hours* |
|---|---|
| *Professional Education*:* | **80** |
| EDU 305 Schooling in America K-14 | 5 |
| EDU 311 General Teaching Lab, I | 5 |
| EDU 312 General Teaching Lab, II | 5 |
| EEC 306 Introduction to Exceptional Children and Youth | 5 |
| EEC 309 Introduction to Language Development and Communication Disorders | 5 |
| EEC 315 Assessment of Exceptional Children and Youth | 5 |
| BSC 300 Human Biology | 5 |
| *or* | |
| EEC 316 Foundations of Exceptionality | |
| EEL 401 Communications Skills, I | 5 |
| EEC 405 Academic Skills for Exceptional Children, I | 5 |
| EEC 406 Academic Skills for Exceptional Children, II | 5 |
| One of the following 3 courses depending upon major: | |
| EEC 407 Educational Planning for the Mentally Retarded | |
| *or* | |
| EEC 408 Educational Planning for Specific Learning Disability | 5 |

| | | |
|---|---|---|
| *or* | | |
| EEC 490 Educational Planning for Behavior Disorders | | |
| EEC 411 Behavioral Approaches to Classroom Learning, I | 5 | |
| EEC 412 Behavioral Approaches to Classroom Learning, II | 5 | |
| EEC 425 Student Teaching | 15 | |
| *Several of the courses in the undergraduate special education program require field work in the community during daytime hours. | | |
| *Electives:* | | **10** |
| | | **90** |

## GRADUATE PROGRAMS

The Division prepares resource and consulting personnel whose major function is to help students who are experiencing academic or social adjustment problems in the schools. Competencies are stressed in the assessment of academic and social behaviors, educational programming, individual and group behavior change strategies, compensatory education and general child advocacy.

An applicant for a masters degree must file an application with the Office of Admissions which includes a transcript of academic records and GRE scores. In addition, the applicant must submit to the Graduate Admissions Committee of the Division: 1) three recommendations, at least one from academic sources and one from work or volunteer experience; b) an autobiography, including a record of work experience. An applicant may also be scheduled for an interview. Criteria for admission include consideration of GRE scores and academic record, personal references, the candidate's clarity in presenting career aspirations, social intervention skills, evidence of a service orientation (to individuals and community) and willingness to commit time to field experiences during training.

An applicant to the program in Diagnostic Teaching must have completed an undergraduate training program in Special Education or possess a Rank III certificate or equivalent in another area of education.

*Students accepted in the counselor education or school psychology programs should plan for and be prepared to commit time during the day for course-related experiences.* The second year of training contains a series of field experiences including an internship for at least one quarter.

Graduate programs of study are available in the following areas:

### DIAGNOSTIC TEACHING

The major competencies of the diagnostic teacher are an extension of those developed by the student in the undergraduate special education curriculum; a) assessment of learning styles through observation and on-going monitoring techniques; b) application of behavioral approaches to the building, monitoring, and remediation of classroom behavior; c) communication of information concerning children to others within the school and to parents; d) behavioral change monitoring; e) curriculum planning and innovations; f) teacher and parent consultation; g) supervision of special education units.

The program of study is 45-60 quarter hours, depending upon the student's background. Areas of specialization include: Mental Retardation, Behavior Disorders and Specific Learning Disabilities.

The program leads to Rank II certification in the State of Florida in either Mental Retardation, Emotional Disturbance or Specific Learning Disabilities.

DEGREE: *Master of Science*

## IN FIELD MAJORS

The following program of study is for the student who holds an undergraduate degree in Special Education from Florida International University. A student with an undergraduate major in Special Education from another institution must plan a program with his/her academic advisor to insure having the entry skills for this program.

| | Quarter Hours |
|---|---|
| *General Professional Education* | 4 |
| EDU 507 Analysis & Application of Educational Research | 4 |
| *Area of Specialization* | 26-33 |
| PPS 505 Professional Problems in Special Education and Pupil Personnel Services | |
| *NOTE: One to three of the following courses depending on the student's preparation: | 4-12 |
| *EEC 610 Diagnostic Teaching: Systems & Behavioral Models | 4 |
| *EEC 611 Diagnostic Teaching: Educational Assessment | 4 |
| *EEC 612 Diagnostic Teaching: Acquisition of Reading & Language Skills | 4 |
| *EEC 613 Diagnostic Teaching: Advanced Practicum | 4 |
| *EEC 614 Diagnostic Teaching: Consultation & Leadership Skills | 4 |
| *NOTE: One of the following three courses depending upon area of certification pursued: | |
| *EEC 615 Advanced Theory and Practice: Mental Retardation | |
| *or* | |
| *EEC 616 Advanced Theory and Practice: Specific Learning Disability | 4 |
| *or* | |
| *EEC 617 Advanced Theory and Practice: Behavior Disorders | |
| EEC 695 Supervised Field Experience in Special Education | 5 |
| PPS 621 Assessment of Behavior, I | 5 |
| PPS 626 Program Evaluation in Psycho-Educational Services | 4 |
| *Electives* | 7-15 |

## OUT OF FIELD MAJORS

A student with an undergraduate major in other areas of education should consult with an academic advisor for evaluation of entry competencies to the program. If entry competencies cannot be demonstrated either on the basis of course equivalents, work experience or actual performance tests, the student will be asked to complete one or more of the following courses in addition to those listed above:

| | Quarter Hours |
|---|---|
| EEC 407 Educational Planning for the Mentally Retarded | |
| *or* | |
| EEC 408 Educational Planning for Specific Learning Disability | 5 |
| *or* | |
| EEC 409 Educational Planning for Behavior Disorders | |
| EEC 608 Exceptional Children and Youth | 4 |
| EEC 695 Supervised Field Experience in Special Education | 5-10 |

| | |
|---|---|
| PPS 601 Behavioral Counseling and Consultation, I | 5 |
| NOTE: Two to five of the following courses depending on the student's preparation: EEC 610, 611, 612, 613, 614. | 8-20 |

## COUNSELOR EDUCATION

The program in counselor education requires 90 quarter hours of credit. The first 45 hours are largely generic in nature and lead to the development of competencies in individual and group counseling and other social and behavioral change techniques; consultation; program organization and evaluation; and coordination of school and community-centered interventions. Training patterns are more differentiated during the last 45 hours and lead to specialization in the following areas: a) counseling in the elementary schools; b) counseling at the secondary school level; c) counseling in higher education; d) vocational counseling; and, e) community counseling.

The school counseling programs qualify the student for certification in "Guidance" in the State of Florida and meet the standards for preparation of counselors recommended by the American Personnel and Guidance Association.

DEGREE: *Master of Science*

| | *Quarter Hours* |
|---|---|
| *General Professional Education*:* | **4** |
| EDU 507 Analysis and Application of Educational Research | 4 |
| *Area of Specialization:* | **64-69** |
| PPS 505 Professional Problems in Special Education and Pupil Personnel Services | 6 |
| PPS 506 Introduction to Counseling | 5 |
| PPS 508 Educational and Vocational Guidance | 5 |
| PPS 601 Behavioral Counseling and Consultation I | 5 |
| PPS 602 Behavioral Counseling and Consultation II | 5 |
| PPS 610 Human Interaction I: Group Process Laboratory | 5 |
| PPS 611 Human Interaction II: Analysis of Group Participation | 5 |
| **PPS 612 Human Interaction III: Organizational Consultation | 5 |
| PPS 626 Program Evaluation in Psycho-Educational Services | 4 |
| PPS 627 Measurement and Appraisal in Counseling | 4 |
| PPS 628 Advanced Practica in Pupil Personnel Services: Counseling and Consultation | 5 |
| PPS 695 Supervised Field Experience in Pupil Personnel Services | 15 |
| *The student should consult with his or her advisor to establish whether additional requirements must be met in general professional education. | |
| **Required only in community counseling. | |
| *Electives:* | **17-22** |
| | **90** |

The student should consult with his or her academic advisor for guidance in selecting electives appropriate for specialization in school, vocational or community counseling.

## SCHOOL PSYCHOLOGY

The program in school psychology requires 90 quarter hours of credit and six quarters of graduate study. In general, the competencies to be demonstrated by the student completing this program are derived from the following concepts of role behaviors for the school psychologist: behavioral/educational assessment and planning; counseling and child-centered consultation with teachers, parents and agency representatives; staffing, liaison, referral and case management; program development and evaluation; inservice education; administrative consultation and community development.

DEGREE: *Master of Science*

| | Quarter Hours | |
|---|---|---|
| *General Professional Education*:* | | 4 |
| EDU 507 Analysis and Application of Educational Research | 4 | |
| *The student should consult with his or her academic advisor to establish whether additional requirements must be met in general professional education. | | |
| *Area of Specialization:* | | 67-75 |
| PPS 505 Professional Problems in Special Education and Pupil Personnel Services | 4 | |
| PPS 506 Introduction to Counseling | 5 | |
| PPS 601 Behavioral Counseling and Consultation I | 5 | |
| PPS 602 Behavioral Counseling and Consultation II | 5 | |
| PPS 610 Human Interaction I | 5 | |
| PPS 611 Human Interaction II | 5 | |
| PPS 621 Assessment of Behavior I | 5 | |
| PPS 622 Assessment of Behavior II | 5 | |
| PPS 629 Advanced Practica in Pupil Personnel Services: Psycho-Educational Assessment and Consultation | 5 | |
| PPS 626 Program Evaluation in Psycho-Educational Services | 4 | |
| PPS 695 Supervised Field Experience in Pupil Personnel Services | 15 | |
| *One to three of the following courses depending upon the student's background:* | | 4-12 |
| EEC 610, 611, 612, 613, 614 | | |
| *Electives:* | | 11-19 |
| A student with an undergraduate major in education is encouraged to select electives in the Social and Behavioral Sciences. An undergraduate major in Psychology or similar area is encouraged to build his or her competencies in education. | | |
| | | 90 |

# COURSE OFFERINGS

## SPECIAL EDUCATION

EEC 306 INTRODUCTION TO EXCEPTIONAL CHILDREN AND YOUTH (5) (F,W,SS) Significant concepts in relation to the learning and adjustment problems of exceptional children and youth. Field experiences required.

EEC 309 INTRODUCTION TO LANGUAGE DEVELOPMENT AND COMMUNICATION DISORDERS (5) (F,W,SS) Skills in assessing and classroom programming for language development and various speech and language disorders of children.

EEC 315 ASSESSMENT OF EXCEPTIONAL CHILDREN AND YOUTH (5) (S,SS) Competencies in assessment of the basic modalities of learning (visual, auditory, haptic and perceptual-motor processes) and the language areas of reading, writing, spelling and arithmetic.

EEC 316 FOUNDATIONS OF EXCEPTIONALITY (5) (W,SS) Basic concepts in relation to the biological, genetic, psychological and social foundations of handicapping conditions as they apply to classroom behavior.

EEC 405 ACADEMIC SKILLS FOR EXCEPTIONAL CHILDREN, I (5) (F,S) Competencies in the selection, adaptation and preperation of appropriate instructional materials in arithmetic, art, music, science and social studies, including skill with audio-visual equipment and other multi-media approaches. Prerequisites: EEC 306, EEC 309, EEC 315 and EEL 401.

EEC 406 ACADEMIC SKILLS FOR EXCEPTIONAL CHILDREN, II (5) (W,SS) Skills in a systems approach to individualized instruction in the classroom, including design and implementation of teaching strategies in all academic skill areas. Field experience required. Prerequisites: EEC 405 and EEC 411.

EEC 407 EDUCATIONAL PLANNING FOR THE MENTALLY RETARDED (5) (W,SS) Concepts and skills used in planning educational, prevocational and vocational programs for the mentally retarded. Laboratory experiences required. Prerequisites: EEC 405 and EEC 411.

EEC 408 EDUCATIONAL PLANNING FOR SPECIFIC LEARNING DISABILITY (5) (W,SS) Concepts and skills with various models of curriculum, instructional and classroom designs for individuals with specific learning disabilities. Laboratory experiences required. Prerequisites: EEC 406 and EEC 411.

EEC 409 EDUCATIONAL PLANNING FOR BEHAVIOR DISORDERS (5) (W,SS) Concepts and skills with various models of curriculum, instructional and classroom design for individuals with social and emotional adjustment problems. Laboratory experiences required. Prerequisites: EEC 405 and EEC 411.

EEC 411 BEHAVIORAL APPROACHES TO CLASSROOM LEARNING I (5) (F,S) Concepts and skills for building and modifying social and academic behaviors. Skills in precision teaching, behavior modification and the functional analysis of behavior. Prerequisite: EEC 405.

EEC 412 BEHAVIORAL APPROACHES TO CLASSROOM LEARNING II (5) (W,SS) Concepts and skills necessary for the management and maintenance of classroom behavior, including token economies and parent/teacher consultation. Field experience required. Prerequisite: EEC 411.

EEC 425 STUDENT TEACHING (15) (F,S) A field experience in a program for exceptional children, demonstrating competencies learned throughout the program.

EEC 498 INDIVIDUAL STUDY IN SPECIAL EDUCATION (1-10) (F,W,S,SS) Concepts or competencies contracted for between an undergraduate student and an instructor in accordance with the student's individual needs.

EEC 605 ORGANIZATION, ADMINISTRATION AND SUPERVISION OF SPECIAL EDUCATION PROGRAMS (4) (S) Concepts and skills for organizing, administering and supervising service programs in special education. Competencies in regard to major role and service models and in the application of legal and ethical standards.

EEC 608 EXCEPTIONAL CHILDREN AND YOUTH (4) (F,SS) Significant concepts in relation to the learning and adjustment problems of exceptional children and youth. Field experience and graduate project required.

EEC 610 DIAGNOSTIC TEACHING: SYSTEMS AND BEHAVIORAL MODELS (4) (F,SS) Skills in the application of diagnostic data to various instructional strategies and behavioral models.

EEC 611 DIAGNOSTIC TEACHING: EDUCATIONAL ASSESSMENT (4) (F,W,SS) Skill in application of assessment theory to classroom diagnosis and development of instructional objectives.

EEC 612 DIAGNOSTIC TEACHING: ACQUISITION OF LANGUAGE AND READING SKILLS (4) (W,SS) Concepts in acquisition and development of language and reading skills.

EEC 613 DIAGNOSTIC TEACHING: ADVANCED PRACTICUM (4) (S,SS) Application of diagnostic teaching models to individualized, remedial and compensatory instructional programs.

EEC 614 DIAGNOSTIC TEACHING: CONSULTATION AND LEADERSHIP SKILLS (4) (S,SS) Skills in parent consultation and education.

EEC 615 ADVANCED THEORY AND PRACTICE: MENTAL RETARDATION (4) (S,SS) Major concepts in the area of mental retardation and skills in their application to education.

EEC 616 ADVANCED THEORY AND PRACTICE: SPECIFIC LEARNING DISABILITY (4) (S,SS) Major concepts in the area of specific learning disability and skills in their application to education.

EEC 617 ADVANCED THEORY AND PRACTICE: BEHAVIOR DISORDERS (4) (S,SS) Major theories in the area of behavior disorders, and skills in their application to education.

EEC 695 SUPERVISED FIELD EXPERIENCE IN SPECIAL EDUCATION (5-15) (F,W,S,SS) Demonstration of the full range of competencies in Diagnostic Teaching learned throughout the program. Internship placements in a variety of field settings.

EEC 696 SEMINARS IN SPECIAL EDUCATION (4, repeatable to 12) (F,W,S,SS) A. Topics in Mental Retardation B. Topics in Specific Learning Disability C. Topics in Behavior Disorders

EEC 697 WORKSHOP IN SPECIAL EDUCATION (1-10) (VAR) Selected competencies in special education developed in short-term, intensive workshops.

EEC 698 INDIVIDUAL STUDY IN SPECIAL EDUCATION (1-10) (F,W,S,SS) Concepts or competencies contracted for by graduate students with an instructor.

## PUPIL PERSONNEL SERVICES

PPS 505 PROFESSIONAL PROBLEMS IN SPECIAL EDUCATION AND PUPIL PERSONNEL SERVICES (2, repeatable to 6) (F,W,S) Orientation to the professions of counseling, school psychology and special education. A. Introductory (2) B. Role development in a multi-cultural environment (2) C. Advanced (2)

PPS 506 INTRODUCTION TO COUNSELING (5) (F,W,SS) Major theoretical concepts in counseling. Competencies in relationship-building, interviewing, role-playing, simulation and micro-counseling.

PPS 508 EDUCATIONAL AND VOCATIONAL GUIDANCE (5) (W,SS) Concepts and skills pertaining to vocational development, information systems, career education programs, educational-vocational counseling, and socio-psychological influences on career development.

PPS 601 BEHAVIORAL COUNSELING AND CONSULTATION I (5) (F,W,SS) Concepts and skills in using behavior modification: functional analysis of behavior, precision teaching, token economies, contingency contracting, parent and/or teacher consultation.

PPS 602 BEHAVIORAL COUNSELING AND CONSULTATION II (5) (W,S) Extended laboratory experiences stressing the development of skills in behavioral approaches to individual and group counseling, consultation, parent education, and in-service training. Prerequisite: PPS 601 or equivalent.

PPS 610 HUMAN INTERACTION I: GROUP PROCESS LABORATORY (5) (F,W) Concepts, research and theory relative to small group process. Students will participate in small face-to-face task groups with an emphasis on developing competencies in diagnosis and intervention in small groups.

PPS 611 HUMAN INTERACTION II: ANALYSIS OF GROUP PARTICIPATION (5) (W,S) Participation in an on-going group with attention given to examination of processes of small group phenomena such as interpersonal communication, norms, decision-making, leadership, authority and membership. Prerequisite: PPS 610.

PPS 612 HUMAN INTERACTION III: ORGANIZATIONAL CONSULTATION (5) (S) Theoretical concepts and skills in organizational development and change. Competencies in systems diagnosis and assessment, consultation, agenda setting, team building, decision-making and feedback. Prerequisite: PPS 611.

PPS 621 ASSESSMENT OF BEHAVIOR I (5) (F,W,SS) Basic concepts in assessment theory and competencies in using a variety of standardized tests in assessing and writing educational prescriptions for children with disorders in visual, auditory and haptic processing, in language or integrative systems.

PPS 622 ASSESSMENT OF BEHAVIOR II (5) (W) Concepts and skills in the assessment of intelligence with a particular emphasis on the problems of assessing mental retardation, giftedness, and minority groups. Prerequisite: PPS 621.

PPS 625 ORGANIZATION, ADMINISTRATION AND SUPERVISION OF PUPIL PERSONNEL SERVICES (4) (S) Development of concepts and skills in the organization, administration and supervision of service programs in counseling, school psychology and other areas of pupil personnel.

PPS 626 PROGRAM EVALUATION IN PUPIL PERSONNEL SERVICES (4) (F,S) Evaluation skills in student's area of specialization, including competencies in designing evaluation proposals and conducting an actual program evaluation. Prerequisite: EDU 507.

PPS 627 MEASUREMENT AND APPRAISAL IN COUNSELING (4) (S,SS) Concepts and skills related to the use of tests and other kinds of appraisal procedures in counseling. Particular emphasis upon career and vocational choice processes. Laboratory experiences included.

PPS 628 ADVANCED PRACTICA IN COUNSELING AND CONSULTATION (5) (W) Advanced competencies in counseling and consultation.

PPS 629 ADVANCED PRACTICA: PSYCHO-EDUCATIONAL ASSESSMENT AND CONSULTATION (5) (S) Advanced competencies in psycho-educational assessment.

PPS 695 SUPERVISED FIELD EXPERIENCE IN PUPIL PERSONNEL SERVICES (4 repeatable to 12) (F,W,S) Demonstration of the full range of competencies learned throughout the program in Counseling or School Psychology. Internship placements in a variety of field settings.

PPS 696 SEMINARS IN PUPIL PERSONNEL SERVICES (4, repeatable to 12) (F,W,S,SS) Special topics in relation to counseling or school psychology.

PPS 697 WORKSHOP IN PSYCHO-EDUCATIONAL SERVICES (1-10) (VAR) Selected competencies in counselor education or school psychology developed in short-term, intensive workshops.

PPS 698 INDIVIDUAL STUDY IN PUPIL PERSONNEL SERVICES (1-10) (F,W,S,SS) Competencies contracted for between a student and an instructor in accordance with the student's individual needs.

# DIVISION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

The Division offers bachelors and masters degree programs. All courses of the programs are performance based, are self-paced, and allow considerable individualized instruction.

## UNDERGRADUATE PROGRAMS

Programs in the Division relating to teacher education are designed to meet requirements for certification leading to a *Bachelor of Science* degree in either Health Education or Physical Education. A student receiving a degree in Health Education is certified to teach in Grades 7 through 12; a student receiving a degree in Physical Education is certified to teach in Grades 1 through 12.

A *Bachelor of Science* degree is also granted to a student completing the Parks and Recreation curriculum. Within the general requirements in this program, the student is given an opportunity to develop a program consistent with his or her interests and career goals.

### HEALTH EDUCATION, GRADES 7-12

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION

*Required:* Foundations of Education, (10 quarter hours). Completion of lower division Health Education program, Personal Health.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Subject Matter Specialization:* | | **50** |
| DIN 301 Nutrition and Culture | 5 | |
| HSM 304 Health & Social Service Delivery Systems | 5 | |
| BSC 306 Biological Basis of Human Sexuality | 5 | |
| BSC 310 General Microbiology | 5 | |
| PSY 311 Psychology of Drug Abuse | 5 | |
| EPR 320 Environmental Health | 5 | |
| BSC 373 Human Anatomy or | 5 | |
| BSC 374 Physiology | 5 | |
| HED 407 Community Health | 5 | |
| HED 411 Critical Issues in Health Education | 5 | |
| *Professional Education:* | | **40** |
| EDU 305 Schooling in America | 5 | |
| EDU 311 Teaching Lab I | 5 | |
| EDU 312 General Teaching Lab II | 5 | |
| EDS 401 Special Teaching Lab: Reading | 5 | |
| HED 405 Special Teaching Lab: Health Education | 5 | |
| HED 425 Student Teaching | 15 | |
| | | **90** |

## PHYSICAL EDUCATION, GRADES 1-12

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION

*Required:* Foundations of Education, (10 quarter hours). Completion of lower division Physical Education program, personal health, skill courses in dance, gymnastics, and aquatics plus two or more activities from both individual sports and team sports. Additional activity courses are recommended.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Subject Matter Specialization:* | | **50** |
| PHE 305 Kinesiology | 5 | |
| PHE 306 Exercise Physiology | 5 | |
| PHE 308 Socio-Psychological Perspectives of Physical Activity | 5 | |
| PHE 309 Adapted Physical Education | 5 | |
| BSC 374 Physiology | 5 | |
| PHE 408 Movement Education | 5 | |
| PHE 411 Theory & Practice in Physical Activities | 5 | |
| PHE 412 Rhythms & Dance | 5 | |
| PHE 436 Evaluation in Physical Education | 5 | |
| HED 407 Community Health | 5 | |
| *or* | | |
| HED 411 Critical Issues in Health | 5 | |
| *Professional Education:* | | **40** |
| EDU 305 Schooling in America | 5 | |
| EDU 311 Teaching Lab I | 5 | |
| EDU 312 General Teaching Lab I | 5 | |
| EDS 401 Special Teaching Lab: Reading | 5 | |
| PHE 405 Special Teaching Lab: Physical Education | 5 | |
| PHE 425 Student Teaching | 15 | |
| | | **90** |

### PARKS AND RECREATION

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION

*Required Courses:* Introductory sociology and mathematics

*Recommended Courses:* It is recommended that the student desiring to enter the Parks and Recreation curriculum be a graduate of a two-year program in recreation leadership or its equivalent.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Subject Matter Specialization:* | | 55-70 |
| HRM 301 Management Accounting for the Hospitality Industry | 5 | |
| PRM 305 Principles of Park and Recreation Management | 5 | |
| PRM 307 Care and Maintenance of Grounds | 5 | |
| PRM 350 Personnel Management in Parks and Recreation | 5 | |
| BUA 309 Organization and Management | 5 | |
| PRM 375 Program Development in Parks and Recreation Management | 5 | |
| HRM 320 Operations Control | 5 | |
| PRM 497 Seminar in Parks and Recreation Management | 5 | |
| PRM 425 Internship | 15-30 | |
| *Advised Electives:* | | 20-35 |
| Students will take 20-35 quarter hours of electives after consultation with their advisor. | | |
| | | 90 |

## GRADUATE PROGRAMS

The Division offers a Master of Science degree in Curriculum and Instruction with an emphasis in Health Education, Physical Education, or Parks and Recreation Administration. An applicant wishing to enroll in Health or Physical Education must possess a bachelors degree and/or Rank III Certification in the area of specialization. To enter the program in Parks and Recreation Administration a student must have had appropriate undergraduate preparation. A minimum of 45 quarter hours is required to complete the programs.

### HEALTH EDUCATION

DEGREE: *Master of Science*

| | Quarter Hours | |
|---|---|---|
| *Professional Education:* | | 12 |
| EDU 507 Analysis and Application of Educational Research | 4 | |
| EDU 506 Analysis of Teaching | 4 | |
| EDU 518 Affective Learning in the Classroom | 4 | |
| *Area of Specialization:* | | 21 |
| HED 505 Current Concepts in Community Health | 4 | |
| HED 506 Health Curriculums in Public Schools | 4 | |
| HED 507 Educational Approaches to Health Problems | 4 | |
| PSY 561 Psychology of Mental Health or | 5 | |
| SOC 587 Sociology of Mental Health | 5 | |
| DIN 500 Recent Research in Nutrition or | 4 | |
| DIN 503 Nutrition Education in the Community | 4 | |
| *Electives:* | | 12 |
| | | 45 |

### PHYSICAL EDUCATION

DEGREE: *Master of Science*

| | | Quarter Hours |
|---|---|---|
| *Professional Education:* | | 4 |
| EDU 507 Analysis and Application of Educational Research | 4 | |
| *Area of Specialization:* | | 32 |
| PHE 698 Survey of Research in Physical Education | 4 | |
| PHE 436 Evaluation in Physical Education | 4 | |
| PHE 506 Perceptual Motor Learning | 4 | |
| PHE 535 Sociology of Sport | 4 | |
| PHE 509 History of Sport | 4 | |
| PHE 505 Creative Workshop in Physical Education | 4 | |
| PHE 507 Curriculum Development in Physical Education | 4 | |
| PHE 696 Seminar in Physical Education | 4 | |
| *Electives:* | | 9 |
| | | 45 |

### PARKS AND RECREATION ADMINISTRATION

DEGREE: *Master of Science*

| | | Quarter Hours |
|---|---|---|
| *Professional Education:* | | 13 |
| PRM 505 Program Administration in Parks and Recreation | 4 | |
| PRM 509 Program Development in Parks and Recreation | 4 | |
| PAD 620 Public Administration and Theories of Organization | 5 | |
| *Areas of Specialization:* | | 18-32 |
| PAD 619 Personal Growth and Professional Development | | |
| PAD 621 Personnel Administration and Development Budgeting | | |
| PRM 550 Seminar in Parks, Recreation, and Athletic Management | | |
| PRM 595 Individual Study | | |
| PRM 695 Supervised Field Experiences in Parks and Recreation | | |
| *Electives:* | | 14 |
| | | 45 |

## COURSE OFFERINGS

### HEALTH EDUCATION

HED 405 SPECIAL TEACHING LABORATORY: HEALTH EDUCATION (5) (W) This course is designed to develop competencies directly associated with classroom teaching. Students will be expected to demonstrate these competencies in a variety of public school situations.

HED 407 HEALTHFUL LIVING: COMMUNITY (5) (F) Students will display their competencies in community health by identifying, observing, and discussing aspects of health that affect society such as ecology and pollution.

HED 411 CRITICAL ISSUES IN HEALTH EDUCATION (5) (S) The student will display competencies by distinguishing between and interpreting aspects of health which appear to be most important to society including legislative issues and public opinion.

HED 425 STUDENT TEACHING (15) (F,W,S) During the student's internship he or she will demonstrate those competencies which are characteristic of a competent health education teacher.

HED 505 CURRENT CONCEPTS IN COMMUNITY HEALTH (4) (W) Students will examine the attitudes of people with various social backgrounds and will demonstrate in discussions how these different attitudes relate to the formulation of community health programs.

HED 506 HEALTH CURRICULUMS IN PUBLIC SCHOOLS (4) (S) Students will develop and analyze various health curriculums and validate their appropriateness to various age groups.

HED 507 EDUCATIONAL APPROACHES TO HEALTH EDUCATION (4) (W) Students will select various modern techniques and tools for teaching elementary health education and employ these techniques and tools in a classroom setting.

HED 595 INDIVIDUAL STUDY (1-5) (F,W,S,SS) Designed for individuals to work independently on health education topics of their choice under the direction of faculty member. Permission of the instructor and division chairman is needed.

HED 695 SUPERVISED FIELD EXPERIENCE (5-15) (F,W,S,SS) A practical study pursued in an educational environment at a university, agency or school approved by the faculty. Approval to enroll will be granted upon submission of an acceptable proposal stating objectives and desired outcomes of such an experience.

## PHYSICAL EDUCATION

PHE 305 KINESIOLOGY (5) (S) This course is designed to provide students the opportunity to demonstrate in a teaching situation the application of various principles of movement.

PHE 306 EXERCISE PHYSIOLOGY (5) (W) Students will be expected to apply various aspects of the functioning of the human body to the development of physical education programs and the teaching of specific sport skills.

PHE 308 MAN AND MOVEMENT (5) (S) Students will examine the socio-psychological implications of sport and physical activity and apply this knowledge to the physical education curriculum.

PHE 309 ADAPTED PHYSICAL EDUCATION (5) (W) Competencies to be achieved include both a physiological and psychological understanding of atypical children and the ability to apply this knowledge in practical situations.

PHE 405 SPECIAL TEACHING LABORATORY: PHYSICAL EDUCATION (5) (F,W) This course is designed to develop competencies directly associated with classroom teaching. Students will be expected to demonstrate these competencies in a variety of public school situations.

PHE 408 MOVEMENT EDUCATION IN THE ELEMENTARY SCHOOL (5) (F) After a brief introductory session students will be assigned to a particular elementary school where they will develop competencies in movement education programs for the elementary school age level.

PHE 411 MOTOR LEARNING (5) (F) Students will demonstrate a knowledge and application of the physiological and psychological factors affecting motor skill acquisition and performance.

PHE 412 RHYTHMS AND DANCE (5) (W, every other year) A fundamental movement course based on music where the students will demonstrate teaching competencies in basic rhythms, fundamental dance movements, and folk dancing.

PHE 416 ATHLETIC INJURIES (5) (F) Students will demonstrate the proper care and prevention of athletic injuries through the application of acceptable training techniques.

PHE 425 STUDENT TEACHING (15) (F,W,S) During the student's internship he or she will demonstrate those competencies which are characteristic of a competent physical education teacher.

PHE 436 EVALUATION IN PHYSICAL EDUCATION (5) (W) Students will demonstrate the competencies in motor skill testing, grading, and analysis of written test scores that are necessary for successful teaching in physical education.

PHE 505 CREATIVE WORKSHOP IN PHYSICAL EDUCATION (4) (W) Students will create materials and teaching techniques for physical education. These materials and techniques will then be utilized in practical classroom situations.

PHE 506 PERCEPTUAL MOTOR LEARNING (4) (S) Students will demonstrate knowledge and understandings of various approaches to and theories of perceptual motor learning with special emphasis in physical education. Perceptual motor tasks will be performed as well as taught by the students.

PHE 507 CURRICULUM DEVELOPMENT IN PHYSICAL EDUCATION (4) (W) Students will develop their own curricula after examining and discussing modern curriculum theory. A problem-solving approach will be employed as students test their programs at various grade levels in the public schools.

PHE 509 HISTORY OF PHYSICAL EDUCATION AND SPORT (4) (S) Students will study the history of sport and will take part in writing their own review of sport from a chosen time in history.

PHE 535 SOCIOLOGY OF SPORT (4) (F) Students will demonstrate a thorough understanding of the sociological bases of sport and will actively engage in a field study involving a particular phase of sport and society.

PHE 595 INDIVIDUAL STUDY (1-5) (F,W,S) Students will work independently on a topic concerning some phase of physical education or sport under the guidance of a faculty member. Registration is by permission of adviser.

PHE 695 SUPERVISED FIELD EXPERIENCE (5-15) (F,W,S) Students may use this course to become involved in an in-depth study, research project, or a variety of other activities under the guidance of a faculty member.

PHE 696 SEMINAR IN PHYSICAL EDUCATION (4) (W) Students will participate in the exploration, examination and discussion of problems, issues and trends in physical education and sport.

PHE 698 SURVEY OF RESEARCH IN PHYSICAL EDUCATION (4) (S) Following a survey of research in physical education, students will demonstrate competencies in applying this knowledge to teaching situations in the public schools.

## PARK AND RECREATION

PRM 305 PRINCIPLES OF PARK AND RECREATION MANAGEMENT (5) (F) An exploration of the field of recreation and parks including career areas. Students will be expected to demonstrate competency in the knowledge of management responsibilities and supervisory level principles and theory.

PRM 307 CARE AND MAINTENANCE OF GROUNDS (5) (W) A study of procedures for maintaining outdoor facilities. Students will be expected to display competence in proper maintenance of areas normally found in parks and recreation centers.

PRM 309 TURF GRASS MANAGEMENT (5) (F) A practical approach to the care and maintenance of special grasses such as those found on golf courses and other recreational facilities.

PRM 350 PERSONNEL MANAGEMENT IN PARKS AND RECREATION (5) (W) After a study of how individuals work with one another in a management setting students will demonstrate competencies necessary for hiring staff, conducting group dynamics, communicating to the public, and administering democratically.

PRM 375 PROGRAM DEVELOPMENT IN PARKS AND RECREATION MANAGEMENT (5) (S) Students will attain competencies centered around developing objectives, planning a program, and implementing and administering the program.

PRM 425 INTERNSHIP (15) (F,W,S,SS) An on the job training program designed to enable students to develop those competencies which can only be gained from practical experience.

PRM 497 SEMINAR IN PARKS AND RECREATION MANAGEMENT (5) (S) A discussion of current problems, issues and trends in parks and recreation management which will help the student develop those competencies necessary to deal with every day aspects of particular programs.

PRM 505 PROGRAM ADMINISTRATION IN PARKS AND RECREATION (4) (F) A detailed analysis of administrative procedures and responsibilities in connection with Parks & Recreation facilities and personnel.

PRM 509 PROGRAM DEVELOPMENT IN PARKS AND RECREATION (4) (W) The development of specific programs in parks and recreation with emphasis on special programs for young children, retardates, handicapped, and the elderly.

PRM 550 SEMINAR IN PARKS AND RECREATION ADMINISTRATION (4) (S) A discussion of current problems, issues, and trends in administration of parks and recreation programs.

PRM 595 INDIVIDUAL STUDY IN PARKS AND RECREATION ADMINISTRATION (1-5) (F,W,S) An opportunity for individuals interested in various aspects of park and recreation administration to work on their own under the close supervision of an advisor. Permission of the instructor and department chairman required.

PRM 695 SUPERVISED FIELD EXPERIENCES IN PARKS AND RECREATION ADMINISTRATION (5-15) (F,W,S) A practical experience for individuals interested in administrative responsibilities. Permission of the instructor and department chairman required.



# DIVISION OF VOCATIONAL AND ADULT EDUCATION

The Division prepares and services professional personnel whose major functions are to teach, coordinate, supervise and administer vocational and adult education programs in schools, and other public and private agencies. Programs of preparation utilize a multi-school approach across academic disciplines within the University. The Division utilizes performance-based curricula to develop competencies at the undergraduate and graduate levels. In addition to formal degree programs, the Division offers courses for specific areas of certification in vocational, and adult teacher/administration certification.

## UNDERGRADUATE PROGRAMS

The Division offers undergraduate preparation leading to the degree of *Bachelor of Science* in Education with specialized majors in the following areas: Industrial Arts Education, Technical Education, Vocational Home Economics Education, Vocational Industrial Education. Although the programs are designed for entry into the field of public education, a candidate may seek employment in business, industry or other private agencies.

Applicants for admission are required to have an *Associate* Degree or equivalent course work. For specific entrance requirements consult the general admission statement for undergraduate students in this catalog. Because of the wide range of entry level competencies and career goals, each student in consultation with his or her advisor plans a program of study during the first quarter of enrollment.

### VOCATIONAL HOME ECONOMICS EDUCATION

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* Foundations of Education (10 quarter hours).

*Recommended Courses:* With reference to subject matter specialization, the student is required to have for certification 65 quarter hours in the areas listed below under *Technical Preparation.* These may be earned in courses in both the lower and upper divisions. It is recommended that as many of the basic courses in these areas as possible be taken in the lower division.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Professional Education:* | | 50 |
| EDU 305 Schooling in America | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| HEE 305 Hóme Economics Educational Planning | 5 | |
| EDS 401 Special Teaching Lab: Reading | 5 | |
| HEE 405 Instruction in Vocational Home Economics | 5 | |
| HEE 406 Special Teaching Laboratory | 5 | |
| HEE 425 Student Teaching | 15 | |
| *Technical Preparation:* Total of 65 quarter hours needed from lower and upper division | | (65) |
| Housing and Home Furnishing* | 10 | |
| Management and Family Economics** | 10 | |
| Family and Child Development** | 15 | |
| Food and Nutrition** | 15 | |
| Textiles and Clothing* | 15 | |
| *Courses offered in the School of Technology | | |
| **Courses offered in the School of Health and Social Services | | |
| *Advised Electives:* | | 5 |
| Sub-specialty area of concentration | | |
| Competencies may be developed in one of the following six fields: | | |
| 1. One area of consumer and homemaking education | | |
| 2. One area of wage-earning home economics | | |
| 3. Education for the handicapped | | |
| 4. Education for the culturally disadvantaged | | |
| 5. Education for the adult learner | | |
| 6. Educational settings in business, industry or public service agencies | | |
| | | 90 |

## INDUSTRIAL ARTS EDUCATION

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* Foundations of Education (10 quarter hours).

*Recommended Courses:* With reference to the technical preparation outlined below the student is encouraged to take basic courses in each area in the lower division.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Professional Education* | | 45 |
| EDU 305 Schooling in America | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| EVO 306 Course Planning in Vocational Education | 5 | |
| EDS 401 Special Teaching Laboratory: Reading | 5 | |
| EIA 405 Instruction in Industrial Arts | 5 | |
| EVO 425 Student Teaching | 15 | |
| *Technical Preparation:* | | 45 |
| *Required:* A minimum of 45 quarter hours are required for certification with a minimum of 10 quarter hours in each of the following areas: | | |

**CONSTRUCTION**

| | |
|---|---|
| IAT 305 Construction Technology (5) | 5 |
| IAT 405 Construction Processes (5) | 5 |
| IAT 420* Architectural Drafting (5) | 5 |

**MANUFACTURING**

| | |
|---|---|
| IAT 306 Manufacturing Technology (5) | 5 |
| IAT 419 Materials Processing (5) | 5 |
| IAT 415 Drafting I (5) | 5 |
| *or* | |
| IAT 416 Drafting II (5) | 5 |
| IAT 409* Materials of Industry (5) | 5 |
| IAT 406* Industrial Research and Development (5) | 5 |

**GRAPHIC COMMUNICATIONS**

| | |
|---|---|
| IAT 307 Reprographics (5) | 5 |
| IAT 407 Planographics (5) | 5 |
| IAT 408* Photographics (5) | 5 |

**POWER**

| | |
|---|---|
| IAT 417 Mechanical Power Systems I (5) | 5 |
| IAT 418 Electrical/Electronics Systems (5) | 5 |
| TEY 326* Survey of Electronics (5) | 5 |
| IAT 422* Mechanical Power Systems II (5) | 5 |

**Elective courses:*

*Technical Electives:* See asterisked courses above and other courses offered by the School of Technology. **5**

*Advised Electives:* Enough electives should be taken to equal a minimum of 90 quarter hours.

**90**

**POST-SECONDARY TECHNICAL EDUCATION**

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* Foundations of Education, (10 quarter hours).

*Recommended Preparation:* Technical preparation in the student's intended area of teaching such as electronics technology, architectural technology, dental hygiene, commercial art, electronic data processing, electro-mechanical technology and other occupations requiring training beyond the twelfth grade.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* |
|---|---|
| *Professional Education:* | **75-85** |
| EDU 305 Schooling in America | 5 |
| EVO 509 Technical Education in American Society | 4 |
| EDU 311 General Teaching Laboratory I | 5 |
| EAD 509 Adult Teaching and Learning | 4 |
| EDU 312 General Teaching Laboratory II | 5 |
| EVO 306 Course Planning in Vocational Education | 5 |
| EDS 401 Special Teaching Laboratory: Reading | 5 |
| EVO 407* Supervised Occupational Experience | 5-15 |
| *For the student who lacks acceptable occupational experience in the area to be taught. | |
| *or* | |
| EVO 412 Credit by Examination | 5-45 |
| EVO 504 Educational Media | 5 |

| | | |
|---|---|---|
| EVO 406 Special Teaching Laboratory | 5 | |
| EVO 425 Student Teaching; Technical Education | 15 | |
| *Advised Electives:* Science, mathematics, technology, psychology or sociology | | 10 |
| *Free Electives:* Enough electives should be taken to equal a minimum of 90 quarter hours | | 10 |
| | | 90 |

## VOCATIONAL INDUSTRIAL EDUCATION

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* Foundations of Education (10 quarter hours).

*Recommended Preparation:* Technical preparation in the student's intended area of teaching such as air conditioning and refrigeration, automotive repair, commercial foods preparation, cosmetology, electronics, machine shop trades and other trade and industrial occupations.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Professional Education:* | | 65-75 |
| EDU 305 Schooling in America | 5 | |
| EVO 305 Foundations of Vocational Education | 5 | |
| EDU 311 General Teaching Laboratory I | 5 | |
| EDU 312 General Teaching Laboratory II | 5 | |
| EDS 401 Special Teaching Lab: Reading | 5 | |
| EVO 306 Course Planning in Vocational Education | 5 | |
| EVO 308 Vocational Education Laboratory Management and Safety | 5 | |
| EVO 407* Supervised Occupational Experience | 5-15 | |
| *For students who lack acceptable occupational experience in the area to be taught. | | |
| *or* | | |
| EVO 412 Credit by Examination | 5-45 | |
| EVO 504 Educational Media | 5 | |
| EVO 406 Special Teaching Laboratory: Voc.-Ind. Ed | 5 | |
| EVO 425 Student Teaching; Voc.-Ind. Ed | 15 | |
| *Advised Electives:* | | 10 |
| SOC 455 Man, Society and Technology | | |
| *or* | | |
| SOC 581 Industrial Sociology | 5 | |
| *or* | | |
| PSY 350 Industrial Psychology | | |
| PPS 508 Educational and Vocational Guidance | 5 | |
| *Free Electives:* | | 10 |
| Enough electives should be taken to equal a minimum of 90 quarter hours. | | |
| | | 90 |

## PROFESSIONAL CERTIFICATE PROGRAMS

The Division offers programs for Rank III and Rank II vocational professional certification. A student in any of these programs should enroll in the University as a special student and/or a professional certificate student in Vocational Education.

The Standard Certificate Rank III program in vocational teacher education is designed to qualify the practicing vocational education teacher for employment in comprehensive secondary schools, vocational skill centers, and/or technical institutes.

The Post Standard Professional Certificate Rank II program in Vocational Teacher Education is designed to extend to the practicing vocational education teacher certification for teaching in comprehensive secondary schools, vocational skill centers, and technical institutes.

### RANK III VOCATIONAL TEACHER CERTIFICATION EDUCATION

The Standard Certificate in Rank III (valid for 3 years) will be issued by the State Teacher Certification Office to an individual having: (a) three years full-time teaching experience in vocational industrial education subjects, and (b) 30 quarter hours in professional education and vocational teacher education courses. Specific requirements can be found in Section 42 of the State Teacher Certification Guide. Planned programs of preparation completed for certification requirements may be applied to degree requirements.

RECOMMENDED PREPARATION FOR VOCATIONAL CERTIFICATION

| | | *Quarter Hours* |
|---|---|---|
| *Required Courses:* Foundations of Education. | | **10** |
| *Professional Vocational Education:* | *Certificate Area* | |
| EVO 305 Foundations of Vocational Education | A | 5 |
| EVO 306 Course Planning in Vocational Education (suggested second course in sequence) | B | 5 |
| EVO 308 Vocational Education Laboratory Management and Safety | C | 5 |
| EVO 409 Instructional Processes in Vocational and Technical Education (suggested first course in sequence) | B | 4 |
| EVO 527 Evaluation in Vocational and Technical Education | B | 4 |

### RANK II VOCATIONAL TEACHER CERTIFICATION EDUCATION

The Post Standard Certificate in Rank II (valid for 10 years) will be issued by the State Teacher Certification Office to an individual: (a) who has held a Standard Certificate, Rank III, for a minimum of five (5) years and who has been employed as a teacher in public or non-public schools in Florida for three of the five years, and (b) earned 54 quarter hours of college credit in vocational teacher education and general education and/or general professional education and/or technical education courses.

The 54 quarter hours of course work is planned so that (a) a minimum of 18 and a maximum of 27 quarter hours are earned in professional vocational education courses, and (b) a minimum of 18 and a maximum of 27 quarter hours are earned in general education or general professional education and/or technical education. A Rank II candidate may select courses in planning his/her programs which are applicable to meeting baccalaureate degree requirements. A candidate is urged to consult with a university advisor to formulate a program of study for approval by the State Teacher Certification Office prior to starting his or her program.

## GRADUATE PROGRAMS

The Division offers graduate work leading to the degree *Master of Science* in Education in either Curriculum and Instruction or Administration and Supervision. Requirements for admission to graduate programs in Adult Vocational Education are: (1) completion of an appropriate undergraduate program, (2) satisfactory scholastic aptitude as determined by the graduate admission standards, which includes upper division grade point average of at least 3.0 or appropriate GRE score (1000) or CLEP score (2250).

Areas of emphasis available, along with typical programs of study, follow here. In addition to what is shown, each student must include in his program a course to meet the Florida Department of Education requirement in the teaching of Reading.

*Area of Emphasis:* Adult Education, Industrial Arts Education, Technical Education (Community College Teaching), Vocational Industrial Education, Vocational Home Economics Education.

### VOCATIONAL HOME ECONOMICS EDUCATION

DEGREE: *Master of Science in Education*

| | Quarter Hours | |
|---|---|---|
| *Required Core:* | | 20 |
| HEE 505 Trends in Vocational Home Economics Education | 4 | |
| EVO 507 Curriculum Development in Vocational and Technical Education | 4 | |
| HEE 605 Research in Home Economics Education | 4 | |
| *or* | | |
| EVO 616 Research in Vocational Education | 4 | |
| HEE 606 Teaching Home Economics in the Secondary School | 4 | |
| HEE 696 Seminar in Home Economics Education | 4 | |
| *Area of Professional Emphasis:* With program advisor's approval, a student may select courses in subject matter of Home Economics chosen from offerings outside of the School of Education, based on professional competencies needed. | | 15 |
| *Electives:* The candidate will be encouraged to make selections on the basis of individual needs and career goals. | | 10 |
| | | 45 |

### VOCATIONAL INDUSTRIAL EDUCATION

DEGREE: *Master of Science*

| | Quarter Hours | |
|---|---|---|
| *Required Core:* | | 24 |
| EVO 506 Trends and Issues in Vocational Education | 4 | |
| EVO 507 Curriculum Development in Vocational Education | 4 | |
| EVO 527 Evaluation in Vocational and Technical Education | 4 | |
| EVO 616 Research in Vocational and Adult Education | 4 | |
| EVO 696 Seminar in Vocational Education | 4 | |
| *Area of Professional Emphasis:* A student under the direction of his or her advisor, may develop professional competencies in his or her area of emphasis through school-based field experiences, seminars, methods courses, workshops, or independent study. | | 13-17 |
| *Technical Electives:* The candidate will be encouraged to select courses that will increase his or her subject area technical competence. | | 4-8 |
| | | 45 |

### TECHNICAL EDUCATION

DEGREE: *Master of Science*

| | Quarter Hours | |
|---|---|---|
| *Required Core:* | | 24 |
| EVO 506 Trends and Issues in Vocational Education | 4 | |

| | | |
|---|---|---|
| EVO 507 Curriculum Development in Vocational Education | 4 | |
| EVO 616 Research in Vocational and Adult Education | 4 | |
| EVO 696 Seminar in Vocational Education | 4 | |
| EVO 695 Supervised Field Experience | 4 | |
| *Area of Professional Emphasis:* | | 8 |
| EVO 509 Technical Education in American Society | 4 | |
| EAD 509 Adult Teaching and Learning | 4 | |
| *Technical Electives:* | | 13 |
| The candidate will be encouraged to select courses that will increase his or her subject area technical competence. | | |
| | | 45 |

## INDUSTRIAL ARTS EDUCATION

DEGREE: *Master of Science*

| | | *Quarter Hours* |
|---|---|---|
| *Required Core:* | | 24 |
| EVO 506 Trends and Issues in Vocational Education | 4 | |
| EVO 507 Curriculum Development in Vocational Education | 4 | |
| EVO 527 Evaluation in Vocational and Technical Education | 4 | |
| EVO 616 Research in Vocational and Adult Education | 4 | |
| EVO 695 Supervised Field Experience | 4 | |
| EVO 696 Seminar in Vocational Education | 4 | |
| *Area of Professional Emphasis:* | | 12-16 |
| EIA 605 Analysis of Industrial Arts Education | 4 | |
| EIA 528 Equipment and Facilities Planning | 4 | |
| The student, under the direction of his or her advisor, may develop professional competencies in an area of emphasis via schoolbased field experiences, seminars, methods courses, workshops, or independent study. | | |
| *Technical Electives:* The student is encouraged to select courses that will increase his or her subject area technical competence. | | 5-10 |
| | | 45 |

## ADMINISTRATION AND SUPERVISION

*Area of Emphasis:* Adult Education, Vocational Education

Admission to graduate programs in the Division requires adherence to the general standards as specified in the General Admission Requirements for Graduate Students in this catalog. In addition, an applicant must hold an undergraduate degree in the area in which graduate work will be completed, or in some appropriately related subject. Under certain conditions, an applicant not meeting the minimum requirements, and who has appropriate professional background and aspirations, may be considered on an individual basis by the Division faculty.

Each graduate student, in consultation with his chosen advisor, plans a program of study to include a core of professional competencies, an area of emphasis, and electives. The programs require a minimum of 45 quarter hours.

## ADMINISTRATION AND SUPERVISION OF VOCATIONAL EDUCATION

DEGREE: *Master of Science*

| | Quarter Hours | |
|---|---|---|
| *Required Core:* | | 36 |
| EVO 507 Curriculum Development In Vocational Education | 4 | |
| EVO 517 Supervision and Coordination of Vocational Education Program | 4 | |
| EVO 526 Community Relations and Resources for Vocational Education | 4 | |
| EVO 606 Administration of Local Vocational Educational Programs | 4 | |
| EVO 696 Seminar In Vocational Education | 4 | |
| EDA 605 The Organization and Operation of Public School System | 4 | |
| EDA 607 The Administration of Secondary School | 4 | |
| EDA 608 Supervision In Education | 4 | |
| EDA 609 Curriculum Development | 4 | |
| *Area of Professional Emphasis:* | | 4 |
| EVO 695 Supervised Field Experience | 4 | |
| *Electives:* | | 5 |
| The candidate will be encouraged to select courses that will increase his or her administrative and supervisory competencies. | | |
| | | 45 |

## ADULT EDUCATION: CURRICULUM AND INSTRUCTION ADMINISTRATION AND SUPERVISION

The Graduate Program in Adult Education is designed for the individual who is serving, or chooses to serve, as learning facilitator, counselor, administrator, curriculum developer and/or researcher in adult and continuing education programs in business and industry, public schools, hospitals, governmental agencies, community colleges, universities, civic organizations, military service or other agencies. Graduate programs of study are designed in relation to an individual's specific interests, needs, and career goals.

Admission to Graduate Program in Adult Education includes the standard requirements. In addition to the standard requirements, in some cases a qualifying examination may be required.

DEGREE: *Master of Science*

| | Quarter Hours | |
|---|---|---|
| *Required Core:* to be selected with an advisor from the following: | | 20 |
| EAD 507 Principles and Practices of Adult Education | 4 | |
| EAD 508 Organization and Administration of Adult Education | 4 | |
| EAD 509 Adult Teaching and Learning | 4 | |
| EAD 510 Designing Educational Programs with Disadvantaged Adults | 4 | |
| EAD 519 Program Development in Adult and Vocational Education: Community/ Institutional Level | 4 | |
| EAD 520 Program Development in Adult Education: Instructional/Activity Level | 4 | |
| EVO 616 Research in Vocational and Adult Education | 4 | |

*Area of Professional Emphasis:* The student, under the direction of his or her advisor, may develop professional competencies in an area of emphasis through field experiences, seminars, methods courses, workshops or independent study. **9-12**

*Electives:* The candidate will be encouraged to select courses that will increase his or her competence in a teaching specialty or a supportive social/behavioral science. **13-16**

**45**

# COURSE OFFERINGS

## VOCATIONAL EDUCATION

EVO 305 FOUNDATIONS OF VOCATIONAL EDUCATION (5) (F,S) Competency: A knowledge of the history of vocational education on the national, state, and local levels.

EVO 306 COURSE PLANNING (5) (F,W,S) Competency: Basic knowledge and skill of analyzing planning and organizing bodies of knowledge for instructional purposes.

EVO 308 VOCATIONAL EDUCATION LABORATORY MANAGEMENT AND SAFETY (5) (W) Competency: Knowledge and skill of analyzing, planning, organizing, and controlling laboratory environments and students safe learning activities.

EVO 406 SPECIAL TEACHING LABORATORY (5) (F,W) Competency: Knowledge of institutional structure, organization, policies, and roles of school personnel with actual teaching experience in their areas of specialization. Prerequisites: EDU 311 and EDU 312.

EVO 407 SUPERVISED OCCUPATIONAL EXPERIENCES (5-15) (ARR) Competency: Development of occupational skill via field based work-experience in industry, business, or government agency in an occupation in which the student is preparing to teach.

EVO 408 OCCUPATIONAL SAFETY AND HEALTH (OSHA) (5) (S) Competency: Knowledge of the history, implications and applications of the Occupational Safety and Health Act of 1970. For vocational and technical teachers, industrial employees, and management personnel.

EVO 409 INSTRUCTIONAL STRATEGIES AND EVALUATION IN VOCATIONAL AND TECHNICAL EDUCATION (5) (F) Competency: Knowledge and skill in analyzing, planning, developing, executing, and evaluating, classroom and laboratory teaching and learning activities.

EVO 410 EMERGING EMPHASES IN CAREER EDUCATION (5) (F) Competency: A knowledge of current trends and issues in reference to developing and integrating career education into current elementary and secondary educational programs.

EVO 412 CREDIT BY EXAMINATION (5-45) (ARR) Competency: Demonstration of technical knowledge and skills in an occupation via performance examinations, evaluation of approved licenses, program completion certificates, and/or other documentation of life/work experiences.

EVO 419 LABORATORY ACTIVITIES FOR TEACHERS OF THE HANDICAPPED (5) (F) Competency: The use of projects, tools, materials, and equipment to facilitate training the occupationally and physically handicapped and mentally retarded.

EVO 425 STUDENT TEACHING (15) (W,S) Competency: Utilization of instructional knowledges, attitudes, and skills in a variety of instructional situations in vocational educational setting. Prerequisite: EVO 406.

EVO 502 TEACHING CAREER RELATED ACTIVITIES (5) (W,SS) Competency: Integration and articulation of career concepts and activities with regular curriculum.

EVO 504 EDUCATIONAL MEDIA (5) (F,W,S,SS) Competency: Knowledge and skill in selecting, developing and utilizing instructional media forms to communicate or demonstrate concepts.

EVO 506 TRENDS AND ISSUES IN VOCATIONAL EDUCATION (4) (F,S) Competency: A knowledge of the basic philosophical and curricular trends and issues in vocational-technical education at the international, national, state, and local levels.

EVO 507 CURRICULUM DEVELOPMENT IN VOCATIONAL EDUCATION (4) (W) Competency: Basic knowledge and skill of analyzing, planning, organizing and developing curriculum in an area of specialization.

EVO 509 TECHNICAL EDUCATION IN AMERICAN SOCIETY (4) (W) Competency: Knowledge of the basic role, and current status of technical education in an industrial democracy.

EVO 516 COOPERATIVE VOCATIONAL EDUCATION PROGRAMS (4) (F) Competency: Knowledge and skill in the basic philosophy, principles, and processes and procedures of the cooperative method in vocational and technical education.

EVO 517 SUPERVISION AND COORDINATION OF VOCATIONAL EDUCATION PROGRAMS (4) (F) Competency: Knowledge and skill in the supervision of personnel and the coordination of work to achieve institutional goals.

EVO 526 COMMUNITY RELATIONS AND RESOURCES FOR VOCATIONAL EDUCATION (4) (S) Competency: Knowledge and skill in developing and utilizing community resources and establishing public relations procedures and practices to implement vocational education programs.

EVO 527 EVALUATION IN VOCATIONAL AND TECHNICAL EDUCATION (4) (S) Competency: Knowledge and skills in the use of tests and measurements to evaluate teaching and learning effectiveness and the validity of objectives.

EVO 595 INDIVIDUAL STUDY (1-15) (ARR) Competency: Identifying, researching, and reporting on a special problem of interest to the student. Subject to approval of program adviser.

EVO 597 WORKSHOP IN VOCATIONAL EDUCATION (1-10) Competency: Selected competencies related to: a) Instructional b) Technical

EVO 606 ADMINISTRATION OF VOCATIONAL EDUCATION PROGRAMS (4) (S) Competency: Knowledge of the principles, practices, functions, and roles of administration in the operation of vocational education programs.

EVO 616 RESEARCH IN VOCATIONAL AND ADULT EDUCATION (4) (S) Competency: Knowledge and skill in identifying, defining, collecting, analyzing, and synthesizing research related problems in vocational and adult education.

EVO 695 SUPERVISED FIELD EXPERIENCE (4-8) (ARR) Competency: Application and refinement of competencies in either classroom, laboratory, administration and supervision via school based field experiences. Placement is subject to approval of program advisor.

EVO 696 SEMINAR IN VOCATIONAL EDUCATION (2-4) (W) Competency: The application of knowledges and skills to solve special instructional, curricular and/or administrative and supervisory problems and issues in vocational education.

EVO 697 GRADUATE WORKSHOP IN VOCATIONAL EDUCATION (1-10) (ARR) Competency: Selected competencies related to: a) Professional b) Program

## INDUSTRIAL ARTS EDUCATION

EIA 403 THE ROLE OF INDUSTRIAL ARTS IN THE SCHOOLS (5) Competency: Knowledge of the basic philosophy, goals, programs, principles, practices, learning environments and the relationship of industrial arts to other school disciplines.

EIA 405 INSTRUCTION IN INDUSTRIAL ARTS (5) (F,W) Competency: Applying educational principles, practices, and techniques to the teaching of industrial arts. Prerequisite: EDU 311.

EIA 425 STUDENT TEACHING IN INDUSTRIAL ARTS (15) (W,S) Competencies developed in the utilization of instructional knowledges, attitudes, and skills in Industrial Arts Education instructional situations. Prerequisites: EIA 405; EVO 306

EIA 528 EQUIPMENT AND FACILITIES PLANNING (4) (S) Competency: Utilization of research, design, engineering knowledge and skills to plan laboratory facilities and equipment.

EIA 595 INDIVIDUAL STUDY (1-5) (ARR) Competency: Identifying, researching, and reporting on a special problem in industrial arts of interest to the student. Subject to approval of program adviser.

EIA 605 ANALYSIS OF INDUSTRIAL ARTS EDUCATION (4) (W) Competency: Knowledge of industrial arts at the national, state, and local levels.

## VOCATIONAL HOME ECONOMICS EDUCATION

HEE 305 HOME ECONOMICS EDUCATIONAL PLANNING (5) (F,S) Competency: Development and adaptation of curriculum and strategies for the presentation of vocational home economics content in a variety of educational settings.

HEE 405 INSTRUCTION IN VOCATIONAL HOME ECONOMICS (5) (W,SS) Competency: Applying educational principles, practices and techniques to teaching home economics in varied educational environments. Prerequisites: EDU 311 and HEE 305.

HEE 406 SPECIAL TEACHING LABORATORY HOME ECONOMICS (5) (F,W,S) Competency: Knowledge of the educational institution and utilization of teaching skills via mini-teaching experiences within areas of home economics in selected institutions. Prerequisites: EDU 311, 312, HEE 305, 405.

HEE 425 STUDENT TEACHING IN HOME ECONOMICS EDUCATION (15) Competencies developed in the utilization of instructional knowledges, attitudes, and skills in Vocational Home Economics Education instructional situations. Prerequisites: HEE 305, 405, 406.

HEE 505 TRENDS IN VOCATIONAL HOME ECONOMICS EDUCATION (4) (F,S) Competency: Knowledge of current social, economic and educational issues affecting the field of vocational home economics. Subject to approval of program adviser.

HEE 506* TEACHING FOOD AND NUTRITION (5)

HEE 507* TEACHING CHILD DEVELOPMENT (5)

HEE 508* TEACHING CLOTHING AND TEXTILES (5)

HEE 509* TEACHING FAMILY LIFE EDUCATION (5)

HEE 515* TEACHING HOUSING AND HOME FURNISHINGS (5)

HEE 516* TEACHING CONSUMER EDUCATION AND FAMILY ECONOMICS (5)

HEE 595 INDIVIDUAL STUDY (1-5) (F,W,S) Competency: Identifying, researching and reporting on a special problem in vocational home economics. Subject to approval of program adviser.

HEE 596 SPECIAL WORKSHOP — HOME ECONOMICS (1-5) Competency: Skill in developing, organizing, teaching, evaluating, and administering programs related to specific aspects of home economics education. Subject to approval of program adviser.

HEE 605 RESEARCH IN HOME ECONOMICS EDUCATION (4) Competency: The analysis and application of research pertaining to philosophy, curriculum, evaluations, and teacher education in Home Economics.

HEE 606 TEACHING HOME ECONOMICS IN THE SECONDARY SCHOOL (4) Competency: Knowledge of current and evolving methods, programs, and materials to teach and evaluate home economics. Prerequisite: EVO 507 or permission of instructor.

HEE 607 SUPERVISION OF STUDENT TEACHERS IN HOME ECONOMICS (4) Competency: Skill in teaching, observing, and evaluating student teachers in vocational home economics.

HEE 696 SEMINAR IN HOME ECONOMICS EDUCATION (4) Competency: Application of selected instructional, curricular and/or administrative principles and practices to the solution of problems of special interest to vocational home economics educators. Subject to approval of program adviser.

*Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational methods.

## ADULT EDUCATION

EAD 507 PRINCIPLES AND PRACTICES OF ADULT EDUCATION (4) (F,S) Competency: Developing a rationale for and philosophy of adult education, contrasting agencies, programs, and curricula, evaluating adults' educational pursuits, analyzing factors affecting adult education; differentiating adults and youths as learners; planning and appraising programs for adults.

EAD 508 ORGANIZATION AND ADMINISTRATION OF ADULT EDUCATION (4) (W) Competency: Analyzing regulations affecting adult education; selecting and training staff; selecting organization patterns appropriate for given programs; executing managerial responsibilities; arranging for community involvement and administering supportive services.

EAD 509 ADULT TEACHING AND LEARNING (4) (W,SS) Competency: Differentiating theories of learning in relation to teaching adults; contrasting characteristics of adults as opposed to youth; evaluating the implications of such distinctions in relation to learning situations appropriate for adults.

EAD 510 DESIGNING EDUCATIONAL PROGRAMS FOR DISADVANTAGED ADULTS (4) (S) Competency: Distinguishing various forms of disadvantagement; analyzing these problems and forces which inhibit their solution; critiqueing responses to these problems; developing training programs, curricula and materials, recruitment strategies, and evaluation designs.

EAD 519 PROGRAM DEVELOPMENT IN ADULT AND VOCATIONAL EDUCATION: COMMUNITY/INSTITUTIONAL LEVEL (4) (F,S) Competency: Analyzing variables central to program and community development; analyzing principles and roles requisite for effective group functioning; developing a consensus group philosophy; designing, conducting and interpreting studies of community needs; translating needs into measurable community objectives; mobilizing and integrating resources; planning, conducting and interpreting evaluation studies.

EAD 520 PROGRAM DEVELOPMENT IN ADULT EDUCATION: ACTIVITY/INSTRUCTIONAL LEVEL (4) (S) Competency: Analyzing models for instructional design, identifying and evaluating variables related to such models, developing designs unique for adult learners.

EAD 525 WORKSHOP IN ADULT EDUCATION (3-15) (ARR) Short-term intensive development of selected operational competencies related to instructional, curricular and/or administrative skills, practices and procedures of special interest to students in adult education.

EAD 526-550 SPECIAL TOPICS IN ADULT EDUCATION (1) (ARR) "Mini-courses" which provide for an examination of special facets of adult education.

EAD 595 INDIVIDUAL STUDY IN ADULT EDUCATION (1-5) (F,W,S,SS) Specialized intensive study in areas of interest to the student. Subject to approval of program adviser.

EAD 596 SUPERVISED FIELD EXPERIENCES IN ADULT EDUCATION (1-15) (F,W,S,SS) Internship placements in various on-going adult education programs according to students' needs and interests. On-site supervisory visits are made by program advisor. Joint conferences and seminars involving the student, the program advisor, and appropriate representative of the cooperating agency are also conducted intermittently.

EAD 697 SEMINAR IN ADULT EDUCATION (2-4) (S) Provides intensive study of instructional, curricular, and/or administrative principles and practices for the solution of problems of special interest to students in adult education.

# SCHOOL OF HEALTH AND SOCIAL SERVICES

The School of Health and Social Services offers the following nine programs which lead to a Bachelor of Science Degree in the major program of study. Home Economics is an interdisciplinary program in the School of Education, School of Technology and the School of Health and Social Services. The Dietetics and Nutrition Program also offers a Master of Science Degree in Dietetics. Master's programs in Criminal Justice and in Social Work are in the planning phases.

The School emphasizes an experiential program that is geared toward meeting the total needs of the individual with a primary focus on preventive health and social welfare services, and the criminal justice system. The goal of client-centered care is directed toward the psychosocial, physical and rehabilitative needs of the individual and family unit. Emphasis is placed on the concept of high level wellness of each individual with a community oriented approach to the solution of problems. Thus, the School considers both health and social services inseparable — truly allied fields.

The educational program in the School provides the opportunity to be trained in an interdisciplinary manner within a team-oriented environment, which parallels the responsibility and level of practice expected of professional personnel in the occupational market place. Students enrolled in the programs of the School will receive an enriched program of studies in a broad general education course sequence, core courses common to all helping professions, and specialized professional courses. A clinical affiliation program is given concurrent to theoretic courses, seminars, etc., with specific clinical training and field practice which often emanates in internships at advanced levels in agencies in Florida and other states.

## I. ADMISSION REQUIREMENTS

As part of the 90 quarter hours of lower division coursework, the student is required to meet one or a combination of the following:

— Associate of Arts or an Associate of Science degree
— 90 quarter hours of collegiate work from an accredited institution at an acceptable performance level
— General education requirements

NOTE: Due to the professional and specialized nature of the programs within the School, a student may be admissable to the University but not to a particular program. For program prerequisites, see University Catalogue, call the program or the Office of the Dean.

## II. ADVISEMENT

A student is assigned a faculty advisor upon being admitted to a program and together the student and the advisor plan the program of study. The advisement program for the School is coordinated through the Dean's Office. Students needing pre-advisement may call the Coordinator of Academic Advisement.

## III. CLINICAL AND FIELD EXPERIENCES

As an integral part of the program curriculum, the student is provided supervised learning experiences in community service agencies. The Clinical and Field Work experience is a period of orientation, observation and practice in the delivery of health and social services which is structured concurrently with relevant classroom experiences. Over 150 community organizations in the State of Florida and other states are utilized for student internship, field practice and clinical experiences.

## IV. THE EXTERNAL DEGREE PROGRAM

The external degree program is a self directed non residential program for the residents of Florida. The program enables the student to take advantage of all educational resources throughout Florida without requiring residence on any campus. The student's previous academic training and life experiences are summarized and individual study plans are designed for each student in the form of an educational contract.

The following programs offer the external degree option: Criminal Justice, Health Science

## V. CONTINUING EDUCATION AND SPECIAL PROGRAMS

The School in concert with the Division of Continuing Education, offers many credit courses in Off-Campus locations in Dade, Broward, Collier and Monroe Counties. The Criminal Justice program offers the complete program on an off campus basis in Broward County. A baccalaureate program for Registered Nurses is offered in Collier County, Naples, Florida.

**CRIMINAL JUSTICE** — Prepares practitioners with a scientific and scholarly blend of social, cultural, behavioral, political, and legal learning experiences as they relate to our justice system.

**DIETETICS AND NUTRITION** — Prepares practitioners to protect the health of the nation by developing expertise in the composition of foods, their biological and physiological functions and their preparation for utilization. The undergraduate program is fully accredited by the American Dietetic Association. The program also offers a Master of Science degree in dietetics.

**HEALTH SCIENCE** — Prepares persons to function in several capacities in the health care delivery system. The program contains three options or tracks:

1) The Health Science Management track prepares persons to work in supervisory or middle management positions in hospitals, family health centers, federal health agencies, nursing homes, etc.
2) The education track is designed for students interested in becoming involved in educational processes within health care organizations. This program does not prepare one for teacher certification.

3) The general track allows the student to mold the curriculum around specific career needs.

**HOME ECONOMICS** — Prepares professionals to work with families and individuals in a variety of Home Economics career clusters. The program consists of three areas of specialization: family and child development, consumer and home management, and food and nutrition. These are planned to provide basic competencies in working with people and to develop in-depth knowledge and skills related to one specific area. The School of Health and Social Services participates with the School of Education and School of Technology in an interdisciplinary program of Home Economics Education.

**MEDICAL TECHNOLOGY** — Prepares laboratory professionals to conduct the many laboratory tests utilized to aid physicians and others in their diagnosis and treatment of patients. The Program is fully accredited by the National Accreditation Agency for Clinical Laboratory Sciences.

**NURSING** — Prepares practitioners with basic scientific knowledge in biological and behavioral sciences and technological innovations to promote high level wellness of individuals, families and communities through therapeutic, preventive, rehabilitative and educative measures.

**OCCUPATIONAL THERAPY** — Prepares therapists for medical care and rehabilitation of persons with physical and mental illnesses. Occupational Therapy is oriented toward helping the individual to remain healthy. The therapist employs purposeful activities in a restorative program for the sick and disabled. The program is accredited by the American Occupational Therapy Association and the American Medical Association.

**PHYSICAL THERAPY** — Prepares practitioners to work with persons who are disabled by illness, accident, or were born with a disability. Therapists plan and implement initial and subsequent treatment programs on the basis of test findings, and upon the referral of a licensed physician. The Program is accredited by the American Physical Therapy Association and the American Medical Association.

**SOCIAL WORK** — Prepares practitioners to help solve individual, family, group and community problems by providing an understanding of society's major social issues. The emphasis of the program will be the development of skills needed to initiate and implement social policy. The Program is accredited by the Council of Social Work Education.



## CRIMINAL JUSTICE

The Department offers majors in Criminal Justice with areas of interest in police administration, correctional administration, criminal justice administration, or criminalistics-chemistry. Each of these areas is designed to assist the student in gaining the necessary scientific and scholarly insights and skills to function effectively in his or her field of criminal justice. A masters program is planned to be implemented in the fall, 1976. For entrance and program requirements consult a faculty advisor.

DEGREE: *Bachelor of Science in Criminal Justice*

LOWER DIVISION PREPARATION:

*Required Courses:* None

*Remark:* The student majoring in Criminal Justice should consult with an academic advisor to ensure that the actual courses selected (1) meet program and degree requirements, and (2) are consistent with the individual's long range academic and career objectives.

*Recommended Courses:* 1. The student intending to enroll in the Criminal Justice Program is urged to complete an Associate of Arts Degree at the lower division. An entering student is not required to have been enrolled in a pre-criminal justice program. A student having an Associate of Science degree or 90 quarter hours will also be accepted, but must complete general education requirements before the bachelor degree can be awarded. 2. The Criminalistics-Chemistry concentration is a degree program within the Chemistry Department. Criminalistics-Chemistry Track students should consult the degree requirements for either the B.A. or B.S. degree in Chemistry. Candidates for the B.S. degree should also have a year of General Biology.

UPPER DIVISION PROGRAM:

*Core Courses:* Six courses are required for every student majoring in Criminal Justice. A core course requirement will not be waived for any student unless a

majority of the program faculty approve. These courses are:

CRJ 301* recommended that CRJ 301 be taken during the first quarter at FIU
CRJ 302
CRJ 303
CRJ 401
CRJ 402
CRJ 403* recommended that CRJ 403 be taken after completion of other core courses

*Area of Interest:* 20 quarter hours at the 300 level or above in Criminal Justice are required for Criminal Justice majors. Only 10 quarter hours of Internship (CRJ 440) will count toward this requirement.

*Specific Electives:* 10 quarter hours at the 300 level or above are required in Sociology-Anthropology and/or Psychology.

*General Electives:* 30 quarter hours are required. No more than 20 hours can be Criminal Justice courses. The student may choose a minor by taking 20 of the hours in any area he or she chooses.

NOTE: A student may petition to have a 100 or 200 level course taken at the lower division accepted by the advisor to partially meet the credit requirement in the Area of Interest or Specific Electives noted above. However, the student must still earn 90 quarter hours at the 300 level or above.

NOTE: A student must complete the core courses (30 quarter hours) plus 20 additional hours in Criminal Justice in order to: (1) satisfy the Criminal Justice requirements for a dual major, or (2) obtain a second degree with a major in Criminal Justice, or (3) obtain two bachelor degrees simultaneously (assuming the requirements for two majors have been completed and certified by the appropriate academic units and a minimum of 50 appropriate quarter hours beyond the requirements of the degree have been earned).

## CRIMINAL JUSTICE PROGRAM

| | *Quarter Hours* | |
|---|---|---|
| *Core Courses:* | | 30 |
| CRJ 301 The Nature and Causes of Crime | 5 | |
| CRJ 302 The Roles of Law Enforcement | 5 | |
| CRJ 303 Prosecutorial and Judicial Policy-Making | 5 | |
| CRJ 401 Correctional Philosophy, Theory and Practice | 5 | |
| CRJ 402 Methods of Criminal Justice Research | 5 | |
| CRJ 403 Methods of Institutional Change | 5 | |
| *Area of Interest:* See explanation above | | 20 |
| *Specific Electives:* See explanation above | | 10 |
| *General Electives:* See explanation above | | 30 |
| | | 90 |

## CRIMINALISTICS-CHEMISTRY PROGRAM

*Criminalistics-Chemistry Core Requirements:*
Same as requirements for bachelor degree in Chemistry. (Degree granted by Department of Physical Sciences).

*Chemistry Electives:* If the student chooses the degree in Chemistry, he should elect at least one of the following:

| | |
|---|---|
| CHE 405 Advanced Spectroscopy and Molecular Structure | 5 |
| CHE 412 Modern Analytical Chemistry | 7 |

*Internship:*
A 5-10 credit internship in the laboratory of a participating criminal justice agency.

*Criminal Justice Coursework:*
The student should elect 15 credits of Criminal Justice courses in consultation with an advisor in the Department of Criminal Justice.

*Electives:*
Coursework in the behavioral and political sciences, as well as upper division coursework in the biological sciences, is recommended to total 90 quarter hours.

# COURSE OFFERINGS

CRJ 300 AN OVERVIEW OF CRIMINAL JUSTICE (5) (F,W,S,SS) An overview of the agencies and processes involved in the administration of criminal justice. Interrelationships and functions of the legislature, police, prosecutor, defender, courts and corrections are examined. (Recommended for Non-Majors)

## CORE COURSES:

CRJ 301 THE NATURE AND CAUSES OF CRIME (5) (F,W,S,SS) Social, cultural, behavioral, political and economic causative factors in the development of crime. Psychological and sociological considerations involved in criminal behavior. The role of the legislature as policy maker in criminalizing conduct and the limits of the criminal sanction.

CRJ 302 THE ROLES OF LAW ENFORCEMENT (5) (F,W,S,SS) An analytical examination of roles of the police in the United States and other countries. The policeman as maintainer of order, protector of individual rights, enforcer, provider of non-criminal service, and social worker. Role conflict and the development of the police as a subculture. Police-Community interaction.

CRJ 303 PROSECUTORIAL AND JUDICIAL POLICY MAKING (5) (F,W,S,SS) Structure and functions of the prosecutorial and judicial systems in the United States and other countries. Role of the prosecutor, judge and defender in discretionary disposition of cases without trial. Inter-relationships between the prosecutorial and judicial system and other criminal justice agencies. The policy-making role of the appellate judiciary in criminal law and procedure.

CRJ 401 CORRECTIONAL PHILOSOPHY, THEORY AND PRACTICE (5) (F,W,S,SS) Appraisal of correctional methods utilized in the United States and other countries. Prisons, probation, parole work-release programs, halt-way houses, community-based correction program, and other techniques are analyzed.

CRJ 402 METHODS OF CRIMINAL JUSTICE RESEARCH (5) (F,W,S,SS) Elements of scientific perspective, interaction of research theory and practice. Research design, data collection, analytic and statistical techniques, use of data processing resources and preparation of research reports.

CRJ 403 METHODS OF INSTITUTIONAL CHANGE (5) (F,W,S,SS) Analysis of evolutionary and revolutionary changes in political institutions and agencies. Means, methods and techniques for initiating and implementing meaningful change within the criminal justice system.

## ADMINISTRATIVE CONCENTRATION:

CRJ 311 INSTITUTIONAL ORGANIZATION AND ADMINISTRATION (5) (F) Analysis of the internal organizational structure and of executive roles and functions in criminal justice agencies. Examines administrative and managerial concepts underlying decision making, policy formulation, operational strategies, and coordination and control procedures. Cases and outside research reports are used for specific analysis.

CRJ 312 MANAGEMENT OF HUMAN RESOURCES (5) (W) Analysis of criminal justice manpower input problems — recruitment, selection, placement, training, development and control at all levels. Emphasis is placed upon policy issues, research findings, and advanced techniques.

CRJ 313 PLANNING, BUDGETING AND FINANCIAL ADMINISTRATION (5) (S) Planning, budgeting and financial administration methods as applicable to criminal justice agencies are examined. Emphasis is placed on these techniques as they relate to the formulation of policies, objectives and procedures, the determination of organizational priorities, and as techniques to initiate organizational change. Case studies are developed, presented and analyzed.

## CORRECTIONAL CONCENTRATION

CRJ 321 DELINQUENCY PREVENTION (5) (W) Problems of juvenile delinquency. Organization and administration of delinquency prevention programs: police programs, juvenile courts, institutional treatment, and the use of community resources. Case analysis.

CRJ 421 PROBATION AND PAROLE (5) (F) An examination of the treatment of convicted law violators by the correctional field services before and after prison.

CRJ 422 ADMINISTRATION OF CORRECTIONAL INSTITUTIONS (5) (F) Theories and techniques of administering correctional institutions: treatment, security and custody. Social structure of the prison community and inmate social systems. Case studies.

## GENERAL AND ELECTIVE COURSES

CRJ 395 CONTEMPORARY ISSUES IN CRIMINAL JUSTICE (VAR) (F,W,S,SS) Forum for unusual or special course offerings focusing on contemporary issues in criminal justice.

CRJ 405 ORGANIZED CRIME (5) (W) An in-depth examination of local, national and international organized crime and its impact upon society.

CRJ 430 CRIMINAL JUSTICE AND THE CONSTITUTION (5) (S) A study of the First, Fourth, Fifth, Sixth, Eighth and Fourteenth Amendments to the Federal Constitution as related to the administration of criminal justice.

CRJ 440 FIELD WORK AND SPECIAL PROJECTS (1-15) (F,W,S,SS) Individualized constructive work and/or observational experience in criminal justice agencies, community, organizations or special environments. Advanced counseling of student and advisor's approval required before enrollment.

CRJ 495 DIRECTED READINGS IN CRIMINAL JUSTICE (VAR) (F,W,S,SS) Extensive reading and analysis of appropriate literature under faculty supervisor.

CRJ 496 INDEPENDENT RESEARCH (VAR) (F,W,S,SS) Individually selected program of supervised study related to a specific criminal justice issue. Normally the product will be a research paper suitable for publication. Prerequisite: CRJ 402.

CRJ 500 DIRECTED RESEARCH (VAR) (F,W,S,SS) Advanced research project, suitable for graduate level effort. Focus, ordinarily, should be in a specialized area.

CRJ 596 SEMINAR IN CRIMINAL JUSTICE (5) Advanced study of problems, trends and critical issues involved in the administration of the criminal law and the management, organization and operations of criminal justice and social assistance agencies.

### DIETETICS AND NUTRITION

The Department offers a major leading to a *Bachelors* degree with areas of concentration (tracks) in general dietetics and administrative dietetics, and courses in nutrition for allied disciplines or for the student who desires a working knowledge of nutrition. The Department also offers a *Master of Science* degree program in Dietetics with areas of concentration in Therapeutic and Community Dietetics or Dietetic Management. The undergraduate programs are designed to assist the student gain basic practitioner understandings and skills and to achieve his or her career objectives. The graduate program prepares the student to assume leadership responsibilities in health care institutions, community health agencies, or private practice. The graduate program allows for concentration in research or field application.

## UNDERGRADUATE PROGRAM

The clinical portion of the bachelors programs is part of the Greater Miami Coordinated Undergraduate Dietetic Program, a consortium with Barry College which meets the requirements of The American Dietetic Association both for academic preparation for membership and for internship experience.

The Florida International student must make formal application to the department for the clinical portion of the programs by May 15 of the Spring Quarter before fall admissions. Clinical courses are sequential and require two years to complete. Clinical experiences are available in several hospitals and other health agencies. A graduate of the clinical portion of the programs is eligible to take the registration examination to become a registered dietitian.

A graduate of the above program is awarded a *Bachelor of Science* degree. With special planning and advisement, a program of study leading to the Bachelor of Science degree in Dietetics and Nutrition without clinical experience may be arranged.

### GENERAL DIETETICS

DEGREE: *Bachelor of Science in Dietetics and Nutrition*

LOWER DIVISION PREPARATION:

The student desiring to major in General Dietetics should have completed a large portion of the following: (1) The general education requirements for the bachelors degree; (If not included in the lower division general education coursework, at least one course each in psychology, sociology, anthropology, economics, English composition or technical writing); (2) two courses in inorganic chemistry; (3) one course in organic chemistry; (4) one course in quantity food preparation; (5) one course in statistics; (6) one course in business management; and (7) one course in educational psychology or teaching methods.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* |
|---|---|
| *Required Courses:* | **74-76** |

NOTE: Courses designated below with an asterisk (*) comprise the clinical component, and *must* be taken in the order listed. Clinical experiences are supervised by the course instructors. Clinical stations are located in appropriate hospitals, health agencies and school food service programs. Courses marked with an asterisk (*) are open only to students in the coordinated clinical program. Applied courses and practicum must be taken concurrently with the related didactic courses.

| | |
|---|---|
| DIN 300 Orientation to Dietetics+ | 3 |
| +(Organic Chemistry must be completed before DIN 300 is taken) | |
| DIN 301 Nutrition and Culture (or the equivalent) | 4 |
| *or* | |
| DIN 405 Nutrition: Infancy Through Adolescence | 4 |
| DIN 310 Meal Management (or equivalent course in institutional management) | 4 |
| DIN 440 Dietetics in Community Health* | 7 |
| DIN 330 Diet Therapy | 3 |
| DIN 331 Applied Diet Therapy* | 6 |
| DIN 320 Management of Dietary Systems | 3 |
| DIN 321 Management of Dietary Systems Practicum* | 6 |
| DIN 452 Special Problems in General Dietetics* | 1-3 |
| DIN 450 Dietetic Instruction and Counseling | 2 |
| DIN 441 Dietetic Management of Nutrition Programs (Advanced) | 2 |
| DIN 442 (Applied) Dietetic Management of Nutrition Programs (Practicum)* | 6 |
| DIN 401 Nutrition II | 4 |
| DIN 410 Food Science | 4 |
| DIN 451 Advanced Clinical Practicum in Dietetics* | 9 |
| DIN 490 Seminar in Dietetics and Nutrition* | 6 |
| *Other Requirements:* Microbiology; one course in biochemistry; one course at the 300 level or above in physiology; plus any lower division requirements not completed. | **(19)** |
| *Recommended Electives:* Selected courses in the following areas: education, statistics, social work, health science, adult education, business, anthropology, sociology. | **(3-5)** |

## ADMINISTRATIVE DIETETICS

DEGREE: *Bachelor of Science in Dietetics and Nutrition*

LOWER DIVISION PREPARATION: *Has not received American Dietetic Association approval. See advisor.

The student desiring to major in Administrative Dietetics should have completed a large portion of the following: (1) the general education requirements for the bachelors degree; (if *not* included in the lower division general education coursework, at least one course each in psychology, sociology, anthropology, economics, English composition or technical writing); (2) one course in organic chemistry; (3) one course in inorganic chemistry; (4) one course in labor relations; (5) one course in personnel management; (6) one course in financial management; (7) one course in quantity food preparation; and (8) one course in statistics.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* |
|---|---|
| *Required Courses:* | **74-76** |
| NOTE: Courses designated below with an asterisk (*) comprise the clinical component, and must be taken in the order listed. Clinical experiences are supervised by the course instructors. Clinical stations are located in appropriate hospitals, health agencies and school food service programs. Courses marked with an asterisk (*) are open to students in the coordinated clinical program. Applied courses and practicum must be taken concurrently with the related didactic courses. | |

| | | |
|---|---|---|
| DIN 300 Orientation to Dietetics+* | 3 | |
| +Organic Chemistry must be completed before DIN 300 is taken | | |
| DIN 301 Nutrition and Culture (or the equivalent) | 4 | |
| *or* | | |
| DIN 405 Nutrition: Infancy Through Adolescence | 4 | |
| DIN 310 Meal Management (or equivalent course in Institutional Management) | 4 | |
| DIN 440 Dietetics in Community Health* | 7 | |
| DIN 330 Diet Therapy | 3 | |
| DIN 331 Applied Diet Therapy* | 6 | |
| DIN 320 Management of Dietary Systems | 3 | |
| DIN 321 Management of Dietary Systems Practicum* | 6 | |
| DIN 453 Special Problems in Administrative Dietetics* | 1-3 | |
| DIN 450 Dietetic Instruction and Counseling | 2 | |
| DIN 441 Dietetic Management of Nutrition Programs (Advanced) | 2 | |
| DIN 442 (Applied) Dietetic Management of Nutrition Programs (Practicum)* | 6 | |
| DIN 401 Nutrition II | 4 | |
| DIN 410 Food Science | 4 | |
| DIN 451 Advanced Clinical Practicum in Dietetics* | 9 | |
| DIN 490 Seminar in Dietetics and Nutrition* | 6 | |
| *Other Requirements:* Microbiology; one course at the 300 level or above in physiology plus any lower division requirements not completed. | | **12** |
| *Recommended Electives:* Selected courses in the following areas: education social work, health science, adult education, business, anthropology and sociology. | | **(10-12)** |

## GRADUATE PROGRAM

Admission to the masters program is determined by an evaluation of the applicant's bachelors program. An adequate undergraduate preparation usually includes completion of the minimum requirements for membership in The American Dietetic Association, or an undergraduate major in a closely allied discipline. The graduate admission requirements of the Board of Regents must be met and are as follows: A combined score of 1000 on the Graduate Record Examination (Verbal and Quantitative Aptitude Tests), or at least a "B" average in all upper division coursework.

## DIETETICS

A candidate for the Master of Science degree in Dietetics must complete a minimum of 45 quarter hours of graduate study. Thirty-three of the 45 quarter hours must be taken at Florida International. All graduate coursework must be recent enough to be relevant to the current field of dietetics.

The student's program of study, consistent with his or her career goals, should be planned in consultation with the assigned faculty advisor. The proposed program of study must be filed in the office of the chairman of the department by the end of the first academic quarter of full-time graduate study.

## THERAPEUTIC AND COMMUNITY DIETETICS

DEGREE: *Master of Science in Dietetics*

A candidate for the *Masters* degree in Therapeutic and Community Dietetics must complete the following courses:

| | Quarter Hours |
|---|---|
| DIN 691 Research Methods in Dietetics | 3 |
| *and one of the following:* | |
| DIN 692 Laboratory Research Methods in Nutrition and Food Science | 3 |
| DIN 693 Field Research Methods in Dietetics | 3 |
| *and one of the following:* | |
| DIN 695 Supervised Field Study in Dietetics | 5 |
| DIN 699 Thesis in Dietetics | 5 |
| *and one of the following:* | |
| DIN 690 Pathophysiology of Nutrition | 4 |
| DIN 520 Nutrition and Biochemistry | 4 |
| *and one of the following:* | |
| DIN 601 Nutrition During The Life Cycle | 4 |
| DIN 610 Advanced Food Science | 4 |
| Other DIN courses | 12-14 |
| Courses outside the DIN Program | 12-14 |
| | 45 |

### DIETETIC MANAGEMENT

DEGREE: *Master of Science in Dietetics*

A candidate for the Masters degree in Dietetic Management must complete the following courses:

| | Quarter Hours |
|---|---|
| DIN 691 Research Methods in Dietetics | 3 |
| *and one of the following:* | |
| DIN 692 Laboratory Research Methods in Nutrition and Food Science | 3 |
| DIN 693 Field Research Methods in Dietetics | 3 |
| *and one of the following:* | |
| DIN 695 Supervised Field Study in Dietetics | 5 |
| DIN 699 Thesis in Dietetics | 5 |
| *and one of the following:* | |
| DIN 610 Advanced Food Science | 4 |
| DIN 520 Nutrition and Biochemistry | 4 |
| *and one of the following:* | |
| DIN 620 Advanced Management of Dietary Systems | 4 |
| Elective in Advanced Fiscal or Personnel Management | 4 |
| Other DIN courses | 12-14 |
| Courses outside the DIN Program | 12-14 |
| | 45 |

## COURSE OFFERINGS

### UNDERGRADUATE

DIN 300 ORIENTATION TO CLINICAL DIETETICS (3) (F) Survey of role and responsibilities of dietitian. Legal and ethical considerations necessary for the student dietitian in clinical experiences. Educational and personal qualifications for specialization in dietetics. Prerequisite: Organic Chemistry or permission of chairman. Clinical component: open only to a student in the coordinated clinical program.

DIN 301 NUTRITION AND CULTURE (4) (F) Nutrients and their interrelationships in reference to food habits and needs of various population groups. Introduction to the impact of culture on nutriture and study of personal food pattern development.

DIN 305 FOOD AND THE CONSUMER (4) (W) Study of concerns of purchasing, storage and preparation of food. Consideration of current life style which influences food choices. Designed to give the student skills in purchasing and preparing foods to meet personal, social and physical needs. Demonstration laboratory included. (Recommended for non-majors)

DIN 310 MEAL MANAGEMENT AND SERVICE (4) (F) Development of skills in basic techniques of purchasing, preparation and service of food for individuals and small groups. Includes laboratory and experiences in demonstration techniques. Prerequisite or co-requisite: DIN 301 or permission of instructor.

DIN 320 MANAGEMENT OF DIETARY SYSTEMS (3) (F) Survey of various types of institutional food service systems. Will cover management concepts in planning, implementing and evaluating food service systems. Prerequisite: DIN 300 Clinical Component; open only to a student in the coordinated clinical program.

DIN 321 MANAGEMENT OF DIETARY SYSTEMS PRACTICUM (6) (F) Provides for developing the skills as listed for DIN 320 Clinical assignments will be made in several food service institutions in this area. Corequisite: DIN 320. Clinical component: open only to a student in the coordinated clinical program.

DIN 330 DIET THERAPY (3) (S) Techniques of adjusting nutrients and food intake to accommodate medical treatments and previous nutriture. Menu writing and analysis, translation of dietary prescriptions, techniques of dietary instruction, dietary histories. Prerequisites: DIN 301 or equivalent, Physiology and Biochemistry.

DIN 331 APPLIED DIET THERAPY (6) (S) Observation and participation in dietary treatment activities. In clinical institutions, application of menu writing, translation of dietary prescription, technique of dietary instruction and diet history. Clinical component: open only to a student in the coordinated clinical program.

DIN 401 NUTRITION II (4) (F) Roles of nutrients in metabolic processes. Effects of excesses and deficiencies. Prerequisites: Organic Chemistry, Physiology and DIN 301 or equivalent.

DIN 405 NUTRITION: INFANCY THROUGH ADOLESCENCE (4) (W,S,SS) Nutrient intakes recommended for children in different age groups in respect to social, economic and physical environments. Designed to equip teachers with limited nutrition information to assess nutrient needs and develop skill in incorporating nutrition information in formal and informal learning situation.

DIN 410 FOOD SCIENCE (4) (S) Physical and chemical changes in food occurring as a result of various methods of processing, preparation, and storage of foods. Legal control, economic considerations, nutrient contributions of mass-produced foods compared with foods prepared on-site. Prerequisites: Organic Chemistry, DIN 301, DIN 310.

DIN 415 FOOD AND NUTRITION SCIENCE (4) (S) An overview of the effects of storage, processing and preparation techniques on food and its ingestion by humens. Laboratory included. Prerequisite: Background competency in Food and Nutrition. (Recommended for non-majors)

DIN 440 DIETETICS IN COMMUNITY HEALTH (7) (W) Study of community agencies available for nutrition guidance for differing age groups. Observation and participation in activities of community agencies. Prerequisites: Physiology, DIN 301. Clinical component: open only to a student in the coordinated clinical program.

DIN 441 DIETETIC MANAGEMENT OF NUTRITION PROGRAMS (2) (W) Advanced concepts of managerial functions of a dietitian working as an institutional consultant, a member of a community nutrition program, a private therapeutic consultant (or) (as well as) full time institutional food service administrator will be covered. A part of the clinical sequence. Advanced standing required. Six hours practicum will be taken concomittantly. Clinical component: open only to a student in the coordinated clinical component.

DIN 442 DIETETIC MANAGEMENT OF NUTRITION PROGRAMS PRACTICUM (6) (W) Assignments will be made in various community agencies and institutions for development of beginning professional level competencies in management of nutrition and food service programs. Clinical Component: open only to a student in the coordinated clinical program.

DIN 450 DIETETIC INSTRUCTION AND COUNSELING (2) (W) Motivational methods and instructional techniques will be practiced in simulation activities for development of entry level competencies. Recorders and VTR's will be used for feedback and evaluation. Advanced standing in dietetics required.

DIN 451 ADVANCED CLINICAL PRACTICUM IN DIETETICS (3-9) (S) In-depth study combining theoretical concepts and clinical experience. Learning experience will be planned cooperatively by the student, campus instructor and clinical instructor to meet individual needs and goals of the student. Prerequisite: DIN 441. Clinical component: open only to a student in the coordinated clinical program.

DIN 452 SPECIAL PROBLEMS IN GENERAL DIETETICS (1-3) (W) In-depth study of a problem in general dietetics chosen to coincide with student's interest and career goals. Student will develop objectives stated in behavioral terms and demonstrate skills in information gathering, analysis and technical writing. Clinical component: open only to a student in the coordinated clinical program.

DIN 453 SPECIAL PROBLEMS IN DIETETIC ADMINISTRATION (1-3) (W) In-depth study of a problem in dietetic administration chosen to coincide with a student's interest and career goals. Student will develop objectives stated in behavioral terms and demonstrate skills in information gathering, analysis and technical writing. Clinical component: open only to a student in the coordinated clinical program.

DIN 490 SEMINAR IN DIETETICS AND NUTRITION (3-9)* (S) Study of current dietetic and nutrition problems, and research findings. Prerequisite: DIN 440 or permission of instructor. Clinical component: open only to a student in the coordinated clinical program.

## GRADUATE

DIN 500 RECENT RESEARCH IN NUTRITION (4) (S) Updating of nutrition information. Study of current nutrition research. Prerequisite: One recent course in nutrition. Taught alternate springs. Recommended for Home Economists.

DIN 501 ETHNIC INFLUENCES OF NUTRITURE AND FOOD HABITS (4) (F) Systematic study of the food habits of various cultural groups. Emphasis is placed on methodology, analysis of data, relationship of food habits to nutritional standards and corrective measures. Prerequisite: Competency in food preparation and nutrition. Recommended for Home Economists.

DIN 503 NUTRITION EDUCATION IN THE COMMUNITY (4) (F) (SS) In-depth study of nutrition education information and methods in the community including the nutrition education component of school food service and other congregate meal programs. Prerequisite: Recent courses in nutrition education or permission of instructor. Taught in fall term alternately with DIN 505. Recommended for Home Economists.

DIN 505 FOOD, NUTRITION AND COMMUNICATION (4) (F) Covers concepts and techniques for effective professional communication with individuels, groups and other professionals. Emphasis will be placed on differences in approach to communication in small groups vs. mass media. Prerequisite: Advanced standing, competency in food and nutrition knowledge. Taught in fall quarter alternately with DIN 503. Recommended for Home Economists.

DIN 520 NUTRITION AND BIOCHEMISTRY (4) (F) Advanced study of the relationship of nutrition and biochemistry with emphasis on digestion, absorption and metabolism of carbohydrates, lipids and proteins. Prerequisites: Physiology, Biochemistry and DIN 401, Nutrition II.

DIN 530 DIET IN DISEASE PREVENTION AND TREATMENT (4) (W) Critical study — historical, current, and experimental. Prerequisite: DIN 330 or equivalent. Taught every other winter term.

DIN 560 WORKSHOP IN DIETETICS AND NUTRITION (1-5) (SS) Short term intensive development of selective subject matter in dietetics, nutrition and nutrition education techniques and methods suitable for nutritionists, home economists at the graduate level.

DIN 600 GRADUATE SEMINAR IN DIETETICS (1) (F,W,S,SS) An exploration of current issues in the field of dietetics and nutrition. Topics will be decided by the class and instructor(s). Each student has an opportunity to lead the discussion. One hour required of all graduate students. Student may repeat up to 3 hours.

DIN 601 NUTRITION DURING THE LIFE CYCLE (4) (S) In-depth study of nutrient needs of individuals and groups at different stages of life. Emphasis on nutrient inter-relationships and effects of deficiencies and excesses on metabolism. Prerequisite: DIN 401 or equivalent. Taught spring term alternately with DIN 610.

DIN 610 ADVANCED FOOD SCIENCE (4) (S) In-depth study of chemical and physical properties of interactive components of selected foods. Emphasis on effects of additive and methods of preparation and preservation. Prerequisite: DIN 410 or equivalent. Taught spring term alternately with DIN 601.

DIN 620 ADVANCED MANAGEMENT OF DIETARY SYSTEMS (5) (S) Emphasis on management and organizational theory. Innovative projects for the development of management competencies will be developed to meet needs of individual students. Prerequisite: Permission of instructor.

DIN 640 ADVANCED COMMUNITY NUTRITION (4) (S) In-depth study of assessment of nutriture in population groups and needs of public for nutrition information. Emphasis on nutrition consultation for health professionals and methods of delivery of dietary care. Prerequisite: DIN 441 or equivalent. Taught spring term alternately with DIN 520.

DIN 650 INDIVIDUAL STUDY IN DIETETICS (2-5) (F,W,S,SS) Further study and investigation of a phase of dietetics. Emphasis on recent findings in dietetics and allied disciplines. Prerequisite: Consent of the chairman of the department.

DIN 690 NUTRITIONAL PATHOPHYSIOLOGY (4) (F) Systems of the body in relation to the pathological conditions allied to digestion, absorption, metabolism, and other states in which nutrition plays a part in etiology or treatment. Prerequisites: Physiology, DIN 330, DIN 401.

DIN 691 RESEARCH METHODS IN DIETETICS (3) (F) Consideration of scientific method and theoretical orientation as applied to research in dietetics. Special consideration given to various techniques of investigation, data collection, data organization and interpretation. Prerequisite: Permission of instructor.

DIN 692 LABORATORY RESEARCH METHODS IN NUTRITION AND FOOD SCIENCE (3) (W) Laboratory application of research methods in dietetics. Prerequisites: DIN 691 and consent of department chairman.

DIN 693 FIELD RESEARCH METHODS IN DIETETICS (3) (W) Application of field research methods in interpreting and designing research studies. Introduction to interdisciplinary research approaches will be included. Prerequisites: DIN 690 and consent of department chairman.

DIN 695 SUPERVISED FIELD STUDY IN DIETETICS (5) (F,W,S,SS) Pre-planned practical experience at the professional level in an area of dietetics. Critical written evaluation by student with frequent consultation and supervision of instructor. Prerequisite: Professional competency in dietetics and permission of the chairman of the department.

DIN 699 THESIS IN DIETETICS (5) (F,W,S,SS) By arrangement with student's thesis committee.



## HEALTH SCIENCE

The Department offers three areas of concentration (tracks) leading to the bachelors degree in health science: health science management, health science education, and health science general studies.*

DEGREE: *Bachelor of Science in Health Science*

LOWER DIVISION PREPARATION:

*Required:* an *Associate of Science* degree in the allied health field, or an *Associate of Arts* degree (upon approval of the department), or the equivalent.

*Recommended:* an applicant should have academic preparation in the following fields: economics, college algebra, accounting, social sciences, introduction to statistics.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* |
|---|---|
| *Core Courses:* required of *every* health science major. | **18** |
| HSM 304 Health and Social Service Delivery Systems | 5 |
| HSM 400 Management for the Health Professions | 5 |
| HSM 401 Information Systems | 5 |
| HSM 403 The Team Approach to Service Delivery | 3 |

*Electives:* In addition to the required courses for all health science majors *and* the required core courses in the student's area of concentration (track), electives may be selected from any department within the University. Electives in Health Science are recommended. Internship experiences are also made available to students.

## HEALTH SCIENCE MANAGEMENT TRACK

This program provides in-depth training in health services and health care administration, including supportive courses in the liberal arts and sciences, and leads to a *Bachelor of Science* degree. The program is designed to prepare the student to begin a career in health administration at the middle-management level in community hospitals, university medical centers, state and federal health agencies, nursing homes, and voluntary health agencies. The student desiring to proceed directly into graduate study can seek admission into the Health Management Program leading to a Master of Science in Management-Health Care offered by the School of Business and Organizational Sciences at Florida International. Refer to the appropriate section of this catalog.

| | Quarter Hours | |
|---|---|---|
| *Required Track Courses:* | | **53** |
| 1. HSM 304 Health and Social Service Delivery Systems | 5 | |
| HSM 311 Introduction to Public Health | 5 | |
| HSM 400 Management for the Health Professions | 5 | |
| HSM 401 Information Systems | 5 | |
| HSM 403 The Team Approach to Service Delivery | 3 | |
| HSM 480 Issues and Trends in Health Care Delivery | 5 | |
| HSM 495 Legal Aspects and Legislation in Health Care | 5 | |
| 2. HCM/HSM 413 Management Analysis in Health Care Institutions | 5 | |
| HCM/HSM 414 Health Care Systems | 5 | |
| HCM/HSM 517 Human Resource Management in the Health Care Field | 5 | |
| HCM/HSM 418 Health Care Financial and Accounting Management | 5 | |
| *Electives:* may be selected from any department in the University. | | **37** |
| | | **90** |

*This curriculum is currently under revision and is subject to change.

## HEALTH SCIENCE EDUCATION TRACK

This program is designed to prepare students to work in settings requiring educational skills in health care settings and community colleges. Additional clinical courses are not required. This track does not prepare the student for certification as teachers in public schools grades K-12.

Electives in psychology and education are recommended.

| | Quarter Hours |
|---|---|
| HSM 304 — Health and Social Service Delivery Systems | 5 |
| HSM 311 — Introduction to Public Health | 5 |
| HSM 400 — Management for the Health Professions | 5 |
| HSM 401 — Information Systems | 5 |
| HSM 403 — The Team Approach to Service Delivery | 3 |

| | | |
|---|---|---|
| HSM 495 — Legal Aspects and Legislation in Health Care | 5 | |
| EVO 305 — Foundations of Vocational Education | 5 | |
| EVO 306 — Course Planning in Vocational Education | 5 | |
| EVO 409 — Instructional Strategies and Evaluation in Vocational and Technical Education | 5 | |
| EVO 504 — Educational Media | 5 | |
| | | 48 |

### HEALTH SCIENCE GENERAL STUDIES TRACK

This program is provided for the student who has completed a two-year professional program, and who desires little or no additional clinical training. The student may largely design his or her own program of study to meet particular career needs in consultation with a faculty advisor.

| | | *Quarter Hours* |
|---|---|---|
| *Required Track Courses:* | | 43 |
| HSM 304 Health and Social Service Delivery Systems | 5 | |
| HSM 311 Introduction To Public Health | 5 | |
| HSM 390 Individual Study | 10 | |
| HSM 400 Management for the Health Professions | 5 | |
| HSM 401 Information Systems | 5 | |
| HSM 403 The Team Approach to Service Delivery | 5 | |
| HSM 480 Issues and Trends in Health Care Delivery | 3 | |
| HSM 495 Legal Aspects and Legislation in Health Care | 5 | |
| *Electives:* | | 47 |
| | | 90 |

## COURSE OFFERINGS

HSM 304 HEALTH AND SOCIAL SERVICE DELIVERY SYSTEMS (5) Presents the history of, and the fundamental concepts involved in the health and social service delivery system. Includes a review of international health care systems, relevant legislation and federal, state, and local health and social service programs.

HSM 311 INTRODUCTION TO PUBLIC HEALTH (5) An overview of the organization of public health systems at various levels, public health history and philosophy, major public health issues and the broader societal environment of public health concerns.

HSM 390 INDIVIDUAL STUDY (1-10) This course is designed to allow students an opportunity to do an in-depth research or action-oriented project under faculty supervision.

HSM 400 MANAGEMENT FOR THE HEALTH PROFESSIONS (5) Fundamentals of management underlying the solution of problems of organization and operation of health programs.

HSM 401 INFORMATION SYSTEMS (5) Fundamental concepts of statistics, research design and data processing as it relates to health programs.

HSM 403 THE TEAM APPROACH TO SERVICE DELIVERY (3) Various models for the team delivery of health and social services will be described and analyzed. The roles and functions of related service professionals will be identified.

HSM 480 ISSUES AND TRENDS IN HEALTH CARE DELIVERY (5) Analysis of important issues, trends, and problems affecting health care delivery in the U.S. Prerequisite: HSM 304 or permission of instructor.

HSM 481 CONSUMER HEALTH AND SAFETY (5) Includes survey of the problems and products influencing the consumer of health services, and study of solutions to prevent and correct fraud.

HSM 483 PEOPLE, POWER AND HEALTH (5) The historical, psychological, and philosophical rationale for consumer participation in health settings is explored. Appropriate roles for consumers in the decision making process are developed

HSM 484 FAMILY HEALTH CENTERS: AN OVERVIEW (3) Historical review of Family Health Centers. Considers these centers as an alternative in the delivery of health care. Utilizes lectures and field trips.

HSM 490-491 CLINICAL INTERNSHIP (5 each) Course provides an opportunity for the student to practice in the clinical setting, the techniques and skill acquired in the classroom.

HSM 495 LEGAL ASPECTS AND LEGISLATION IN HEALTH CARE (5) A study of how the law affects health care in the public and private sectors. The course is designed to aid professional and allied health personnel to identify legal issues and utilize preventive measures to avoid legal entanglements. Formal lectures and seminar participation will be utilized.

*For course description of 500 and 600 level courses see School of Business and Organizational Science.*

HCM/HSM 413 MANAGEMENT ANALYSIS IN HEALTH CARE INSTITUTIONS (5)
HCM/HSM 514 HEALTH CARE SYSTEMS (5)
HCM/HSM 515 HEALTH PLANNING TECHNIQUES (5)
HCM/HSM 518 HEALTH CARE FINANCIAL AND ACCOUNTING MANAGEMENT (5)
HCM/HSM 680 PROBLEM SOLVING IN HEALTH MANAGEMENT (5)
HCM/HSM 681 HEALTH RESEARCH AND ANALYSIS (5)
HCM/HSM 682 HEALTH DELIVERY SYSTEMS (5)
HCM/HSM 683 THE HEALTH ENVIRONMENT (5)
HCM/HSM 684 HEALTH CARE FACILITIES ORGANIZATION AND MANAGEMENT (5)
HCM/HSM 685 HOSPITAL ORGANIZATION AND ADMINISTRATION (5)
HCM/HSM 687 SEMINAR IN HEALTH MANAGEMENT (1-5)
HCM/HSM 688 FINANCE AND MARKETING OF HEALTH SERVICES (5)

## HOME ECONOMICS

The Department offers a major in home economics for the student who desires to work in home economics and related fields, but who does *not* plan to teach in the secondary school. The Program offers three areas of specialization: General Home Economics and Consumer Management; Food and Nutrition; and Family and Child Development. The courses in family and child development, food and nutrition, and home management and family economics are offered in the School of Health and Social Services for home economics majors, home economics education majors, and for students in other programs to take as electives.

DEGREE: *Bachelor of Science in Home Economics*

LOWER DIVISION PREPARATION:

*Required:* general education requirements for *Associate of Arts* degree

*Recommended:* courses in psychology, sociology, anthropology, chemistry, economics, art, and home economics.

UPPER DIVISION PROGRAM:

### GENERAL HOME ECONOMICS AND CONSUMER MANAGEMENT

This specialization includes a core of home economics courses for personal and professional use and allows a wide choice of advised electives. It is intended to prepare the student to work in industry and business in such jobs as a professional home service representatives consumer consultant, or in product demonstration work:

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **75** |
| Clothing and Textile Courses | 15 | |
| Family and Child Development Courses | 15 | |
| Food and Nutrition Courses | 15 | |
| Housing Courses | 15 | |
| Management and Family Economics Courses | 15 | |
| *Advised Electives:* | | **15** |
| | | **90** |

### FOOD AND NUTRITION

This program provides professional preparation for the person desiring career opportunities related to food and nutrition but who does not wish to become a dietitian. Possible careers include food services manager, and work in consumer and food and nutrition services.

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **80** |
| Core Home Economics Courses | 20 | |
| Food and Nutrition Courses | 40 | |
| Related Courses | 20 | |
| *Advised Electives:* | | **10** |
| | | **90** |

### FAMILY AND CHILD DEVELOPMENT

The student in this program is prepared to enter professions which require a breadth of knowledge related to family and child development such as day care, parent education, nursery teacher, employee in federal and state agencies serving the family.

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* | | **80** |
| Core Home Economics Courses | 20 | |
| Family and Child Development Courses | 40 | |
| Related Courses | 20 | |
| *Advised Electives:* | | **10** |
| | | **90** |

## COURSE OFFERINGS

### HOME MANAGEMENT AND FAMILY ECONOMICS

HMF 306 CONSUMER RESOURCES MANAGEMENT (3) Evaluation of information needed by consumers to make wise spending decisions, including sources of consumer help, information and protection, pertinent legislation, and application of money management principles.

HMF 406 MANAGEMENT OF PERSONAL AND FAMILY RESOURCES (3) Application of management principles to problems related to personal and family living involving human and non-human resources. Includes human development problems observed in the community.

HMF 506 INDEPENDENT LIVING FOR THE HANDICAPPED (5) Designed to enable home economists to work with people with handicaps. Experience provided in adopting home management skills to the needs of the handicapped homemaker. Prerequisite: HMF 406 or equivalent.

HMF 595 FIELD EXPERIENCE IN HOME MANAGEMENT (3-5) Consideration of management decisions made by family members of different ethnic groups and/or life styles, and the influence of these decisions on family relationships. Includes field experience. Prerequisite: HMF 306, 406 or equivalent.

HMF 596 INDEPENDENT STUDY IN HOME MANAGEMENT AND FAMILY ECONOMICS (3-5) Individually selected program of supervised study in a specific area of Home Management or Family Economics. Prerequisite: Permission of Instructor.

### FAMILY AND CHILD DEVELOPMENT

FCD 301 CHILD DEVELOPMENT: INFANCY AND EARLY CHILDHOOD (5) Systematic study of total developmental process in the child from conception through early childhood, emphasizing the effects of home and family environment. Includes observational experiences. Prerequisite: PSY 330 or equivalent.

FCD 401 CHILD DEVELOPMENT: LATER CHILDHOOD (5) Extension of the study of developmental patterns of children with emphasis on physical, intellectual, social and emotional maturation through adolescence. Analysis of environmental and home influences.

FCD 405 THE FAMILY LIFE CYCLE (3) Study of the characteristics, problems, potentials, and adjustments unique to the various stages of the family life cycle; including ethnic and cultural influences on family life patterns.

FCD 501 ADVANCED STUDIES IN CHILD DEVELOPMENT (5) Survey of current literature on selected areas, analysis of trends and issues, and investigation of recent research in Child Development. Prerequisites: FCD 301, 401, or equivalent.

FCD 505 FAMILY DEVELOPMENT (5) The dynamics of family interaction and structure, including analysis of socioeconomic and cultural influences, crisis producing situations, and current issues and trends affecting the family unit.

FCD 595 HUMAN DEVELOPMENT PRACTICUM (2-5) Experience in observing and working with individuals in one or more phases of the human life cycle. Students may select a day care center, public school, nursing home, hospital, or other community service agency. Prerequisites: FCD 301, 401, 405; or equivalent.

FCD 596 INDEPENDENT STUDY IN FAMILY AND CHILD DEVELOPMENT (3-5) Individually selected program of supervised study in a specific area of Family and Child Development. Prerequisite: Permission of Instructor.

### MEDICAL TECHNOLOGY

The programs offered by the department provide opportunities for the student to learn the scientific principles which are basic to the development, performance, evaluation, and control of laboratory tests as a medical technologist in health evaluations and patient management.

The program is approved by the National Accrediting Agency of Clinical Laboratory Sciences, the American Medical Association, and the American Society of Clinical Pathologists. Graduates of the program are eligible to apply for examination and certification by the Registry of Medical Technologists as M.T. (A.S.C.P.) and for licensure as a Technologist by the State of Florida.

One class of students is admitted each year to begin the program in the Fall Quarter. Entrance to the Senior Practicum depends upon satisfactory evaluations of the student's record by the program faculty and the affiliated health care agency.

DEGREE: *Bachelor of Science in Medical Technology*

LOWER DIVISION PREPARATION:

The student seeking admission to the program should have: (1) completed 90 quarter hours (60 semester hours) in an accredited two or four year institution; (2) completed all or most of the general education requirements for the bachelors degree; (3) a cumulative grade point average of 2.5 (on a scale of 4.0) or the equivalent; (4) a minimum of a "C" grade in each required science course; and (5) completed the following preparatory courses: two semesters of biology with laboratory, two semesters of general chemistry with laboratory, two semesters of organic chemistry with laboratory, two semesters of physics with laboratory, and two semesters of pre-calculus mathematics (college algebra or trigonometry).

If an alternate program was completed, such as CLEP examinations, the sophomore level science course with laboratory must have been taken to demonstrate technical skill. Such courses may be taken elsewhere, or at Florida International, *before* the student will be admitted to the program.

UPPER DIVISION PROGRAM:

The following courses must be completed *prior* to completion of the Medical Technology Program, and may either precede, or be taken concurrently, with specific phases of the program: general microbiology including laboratory, quantitative analysis including laboratory, immunology, biochemistry (laboratory is elective).

The student who presents "life experience" and/or training through a program not recognized by the appropriate university regional or professional accrediting association, may request to take a proficiency examination. A satisfactory score will be accepted as equivalent to the Junior Teaching Laboratories for which he is registered.

The Medical Technology Lectures and the Hospital Practicum are required of all students completing the program. The student who has completed the Medical Laboratory Technician Training (M.L.T.) should register for the special Teaching Laboratory courses designed to build upon his or her pre-existing skills: MDT 411, MDT 412, MDT 413, and MDT 414.

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* | | **81-86** |
| *Junior Year* | | |
| *Fall Quarter* | | **14(13)** |
| MDT 401 Clinical Hematology | 2 | |
| MDT 401L Clinical Hematology Laboratory | 3 | |
| *or* | | |
| MDT 411L Directed Study in Hematology (for M.L.T.) | 2 | |
| MDT 471 Hematology Correlations | 2 | |
| BSC 310 Microbiology Lectures and Laboratory | 7 | |
| *Winter Quarter* | | **12(11)** |
| MDT 403 Clinical Microbiology | 2 | |
| MDT 403L Clinical Microbiology Laboratory | 3 | |
| *or* | | |
| MDT 413L Directed Study in Clinical Microbiology (for M.L.T.) | 2 | |
| MDT 473 Microbiology Correlations | 2 | |
| BSC 376 Immunology | 5 | |
| *Spring Quarter* | | **15(14)** |
| MDT 402 Blood Banking and Serology | 2 | |
| MDT 402L Blood Banking and Serology Laboratory | 3 | |
| *or* | | |

| | | |
|---|---|---|
| MDT 412L Directed Study in Blood Banking and Serology (for M.L.T.) | 2 | |
| MDT 472 Blood Banking and Serology Correlations | 2 | |
| MDT 375 Medical Parasitology | 3 | |
| CHE 312 Quantitative Analysis (Lecture and laboratory) | 5 | |
| *Senior Year* | | |
| *Fall Quarter* | | **15(13)** |
| MDT 404 Clinical Chemistry Methods | 4 | |
| MDT 404L Clinical Chemistry Laboratory | 4 | |
| *or* | | |
| MDT 414L Directed Study in Clinical Chemistry (for M.L.T.) | 2 | |
| MDT 474 Clinical Chemistry Correlations | 2 | |
| MDT 483 Advanced Microbiology | 4 | |
| MDT 551 Seminar I | 1 | |
| *Winter Quarter* | | **18** |
| MDT 451L Practicum A | 6 | |
| MDT 482 Advanced Hematology | 4 | |
| MDT 485 Laboratory Statistics and Quality Control | 2 | |
| MDT 552 Seminar II | 1 | |
| BSC 376 Biochemistry (Lecture only required) | 5 | |
| *Spring Quarter* | | **16** |
| MDT 452L Practicum B | 6 | |
| MDT 481 Advanced Chemistry | 5 | |
| MDT 484 Laboratory Management | 2 | |
| MDT 553 Seminar III | 1 | |
| *Electives:* | | **4-9** |
| | | **90** |

## COURSE OFFERINGS

MDT 306 LABORATORY QUALITY CONTROL, SAFETY, AND INSTRUMENT MAINTENANCE (5) (S) Course designed for the working technologist who wishes to protect himself, his co-workers, and others in his environment from the hazards inherent in laboratory operations, and who wishes to present better evidence of compliance with the various inspection and accreditation organizations which now inspect laboratories. Prerequisite: one year of clinical laboratory experience.

MDT 307 MANAGEMENT PROCEDURES FOR LABORATORY EMPLOYEES (2) (SS) Job descriptions, salary schedules, equipment and reagent purchasing, quality assurance programs, work-load recording methods. Individualized projects adapted to meet the needs of facility where student is employed. Prerequisite: one year of clinical laboratory experience.

MDT 309 MEDICAL MYCOLOGY (2) (F,SS) Study of the essential procedures and criteria in the identification of pathogenic fungi. Recognition of fungal contaminants commonly encountered in clinical specimens. Actinomycetes. Actinomycotic agents. Mycoserology. Stains, reagents and media.

MDT 375 MEDICAL PARASITOLOGY (3) (S) Classification, morphology and life cycles of medically significant parasites. Emphasis is on microscopic identification, specimen preservation, and infection control. Lecture and laboratory.

MDT 401 CLINICAL HEMATOLOGY (2) (F) Technical problems involving Hematology, Coagulation, Urinalysis, and Clinical Microscopy. Microscopic identification of normal and abnormal findings. Pitfalls and problems.

MDT 401L CLINICAL HEMATOLOGY LABORATORY (3) (F) Laboratory to accompany MDT 401.

MDT 402 BLOOD BANK AND SEROLOGY (2) (S) Diagnostic serological studies for venereal disease and other infections. Blood grouping and compatibility testing. Irregular antibody techniques. Paternity identification. Transfusion problems associated with pregnancy. Immunology prerequisite.

MDT 402L BLOOD BANK AND SEROLOGY LABORATORY (3) (S) Laboratory to accompany MDT 402.

MDT 403 CLINICAL MICROBIOLOGY (2) (W) Diagnostic microbiological procedures. Study of clinically significant organisms. Isolation media and biochemical tests for identification. Recognition of normal flora. Anaerobic procedures. Viruses, Fungi, Rickettsiae. Serological typing. Antibiotic sensitivity tests. Prerequisite: General Microbiology. Corequisite: Immunology.

MDT 403L CLINICAL MICROBIOLOGY LABORATORY (3) (W) Laboratory to accompany MDT 403.

MDT 404 CLINICAL CHEMISTRY METHODS (4) (F) Medical laboratory procedures for analysis of carbohydrates, proteins, lipids, enzymes, electrolytes. Renal and liver function profiles. Basic instrumentation. Automated analysis with emphasis on continuous flow. Quality control. Credit for all required chemistry lectures and laboratories except Biochemistry are prerequisite.

MDT 404L CLINICAL CHEMISTRY LABORATORY (4) (F) Laboratory to accompany MDT 404.

MDT 411L DIRECTED STUDY IN HEMATOLOGY (2) (F) Selected laboratory techniques to accompany MDT 401 for MLT.

MDT 412L DIRECTED STUDY IN BLOOD BANKING AND SEROLOGY (2) (S) Selected laboratory techniques to accompany MDT 402 for MLT.

MDT 413L DIRECTED STUDY IN CLINICAL MICROBIOLOGY (2) (W) Selected laboratory techniques to accompany MDT 403 for MLT.

MDT 414L DIRECTED STUDY IN CLINICAL CHEMISTRY (2) Selected laboratory techniques to accompany MDT 404 (for M.L.T.)

MDT 421 SELECTED TOPICS IN HEMATOLOGY (2) (VAR) Current topics in Hemetology of clinical significence. Review of literature and discussion of the selected topics. Prerequisite: Permission of the instructor.

MDT 422 SELECTED TOPICS IN BLOOD BANKING (2) (VAR) Current topics in Blood Banking of clinical significance. Review of literature and discussion of the selected topics. Prerequisite: Permission of the instructor.

MDT 423 SELECTED TOPICS IN MICROBIOLOGY (2) (VAR) Current topics in Microbiology of clinical significance. Review of literature and discussion of the selected topics. Prerequisite: Permission of the instructor.

MDT 424 SELECTED TOPICS IN CLINICAL CHEMISTRY (2) (VAR) Current topics in Clinical Chemistry of particular clinical significance. Review of literature and discussion of the selected topics. Prerequisite: Permission of the instructor.

MDT 425 SELECTED TOPICS IN CLINICAL CORRELATIONS (2) (VAR) Current topics in Clinical Correletions of particular significance. Review of literature and discussion of the selected topics. Prerequisite: Permission of the instructor.

MDT 451L and 452L PRACTICUM A AND B (6) (F,W,S) Hospital laboratory experience. Two quarters required. Rotation arranged to include 2 to 3 weeks in each of nine departments. Departmental rotation modified for students with life experience to meet needs or special interest. Rotation will be arranged through the hospital laboratory director and MDT education coordinator. All pre-practicum courses must be completed before admission to hospital rotation.

MDT 471 HEMATOLOGY CORRELATIONS (2) (F) Present diseases associated with abnormal findings in laboratory tests performed in hematology, coagulation, urinalysis, and clinical microscopy. Assist in correlating two or more laboratory procedures which might reinforce the likelihood of specific diseases being identified by laboratory methods.

MDT 472 BLOOD BANK AND SEROLOGY CORRELATIONS (2) (S) Laboratory identification of venereal diseases. Blood Bank regulations in protection of donor and recipient. Blood component therapy selection for specific conditions. Problems of the patient immunized through transfusion therapy.

MDT 473 MICROBIOLOGY CORRELATIONS (2) (W) Medical aspects of infections caused by bacterial, viral, rickettsial, and mycotic pathogens. In vivo and in vitro actions of antimicrobials. Hospital infection control.

MDT 474 CLINICAL CHEMISTRY CORRELATIONS (2) (F) Biochemical tests used in diagnosis and treatment of metabolic disorders. Carbohydrate and protein metabolism, acid-base balance, enzymes, testing for organ function.

MDT 481 ADVANCED CHEMISTRY (5) (S) Lectures and laboratory. Specialized techniques. Steroid Chemistry, electrophoresis. Radio-immune essay. Instrumentation. Automation. Seniors only.

MDT 482 ADVANCED HEMATOLOGY (3) (W) Lectures and laboratory. Bone marrows, Automated hematology. Special problems in hematology and coagulation. Blood Bank techniques for the problem cross-match. Seniors only.

MDT 483 ADVANCED MICROBIOLOGY (4) (F,S) Lectures and laboratory. Identification of rare pathogens. Virology — tissue culture techniques. Mode of action and bacterial resistance to antibiotics. Fluorescent antibody techniques. Immunodiffussion. Immunoelectrophoresis. Seniors only.

MDT 484 LABORATORY MANAGEMENT (2) (S) Personnel handling, laboratory records, equipment and reagent purchasing, laboratory computerization, quality assurance programs, work-load recording programs, scheduling, and methods of laboratory self-evaluation. Seniors only.

MDT 485 LABORATORY STATISTICS AND QUALITY CONTROL (2) (W) (To be developed.)

MDT 491 INDIVIDUALIZED STUDY IN HEMATOLOGY (2-5) (W,S,SS) Introduction to problems in Hematology requiring research or independent study. Special work, lecture and/or laboratory as determined by advisor in accord with student's individual interest. Review of literature. Participation in seminars. Prerequisite: Permission of instructor.

MDT 492 INDIVIDUALIZED STUDY IN BLOOD BANKING (2-5) (F,W,SS) Introduction to problems in Blood Banking requiring research or independent study. Special work, lecture and/or laboratory as determined by advisor in accord with student's individual interest. Review of literature. Participation in seminars. Prerequisite: Permission of instructor.

MDT 493 INDIVIDUALIZED STUDY IN CLINICAL MICROBIOLOGY (2-5) (F,S,SS) Introduction to problems in Clinical Microbiology requiring research or independent study. Special work, lecture and/or laboratory as determined by advisor in accord with student's individual interest. Review of literature. Participation in seminars. Prerequisite: Permission of instructor.

MDT 494 INDIVIDUALIZED STUDY IN CLINICAL CHEMISTRY (2-5) (W,S,SS) Introduction to problems in Clinical Chemistry requiring research or independent study. Special work, laboratory and/or lecture as determined by advisor in accord with the student's individual interest. Review of literature. Participation in seminars. Prerequisite: Permission of instructor.

MDT 495 INDIVIDUALIZED STUDY IN CLINICAL CORRELATIONS (2-5) (F,W,S,SS) Introduction to problems in Clinical Correlations requiring research or independent study. Special work, lecture and/or laboratory as determined by advisor in accord with student's individual interest. Review of literature. Participation in seminars. Prerequisite: Permission of instructor.

MDT 551, 552, 553 SEMINAR I, II, AND III (1) (F,W,S) Three quarters are required. Preparation and presentation of literature review and individualized projects. Instructional methods. Supervisory techniques. Seniors only.

## NURSING

The Nursing Department prepares registered nurses academically and clinically to expand the nursing role in the practice of nursing. Emphasis is on professional commitment, community involvement, and preventive health care.

NOTE: Admission requirements and curriculum are under study and may be revised. Thus the student should consult with the Nursing Program advisor before selecting courses.

DEGREE: *Bachelor of Science in Nursing*

*Admission Requirements:* (1) graduation from a Diploma or Associate Degree Nursing Program (2) current licensure as a registered nurse; (3) at least 45 quarter hours (30 semester hours) of the general education coursework required for the bachelors degree; (4) professional liability insurance for all entering students; (5) specific courses in anatomy and physiology; inorganic and organic chemistry; microbiology; introduction to psychology; introduction to sociology; human growth and development; English composition (two semesters).

*Remark:* Examinations to validate nursing knowledge will be given as an admission requirement.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Nursing required courses:* | | **52** |
| NUR 350 Nursing in an Evolving Health Care System | 3 | |
| NUR 360 Communication Process in Nursing | 3 | |
| NUR 370 Nursing Process: An Overview | 3 | |
| NUR 380 Teaching-Learning in Nursing | 3 | |
| NUR 410 Crisis Intervention | 3 | |
| NUR 420 Nurses' Role in the Process of Change | 3 | |
| NUR 430 Introduction to Nursing Research | 3 | |
| NUR 435 Project in Nursing Research | 3 | |
| NUR 450 Advanced Clinical Concepts | 5 | |
| NUR 450L Advanced Clinical Concepts Lab | 8 | |
| NUR 460 Community Health Nursing | 5 | |
| NUR 460L Community Health Nursing Lab | 10 | |
| *Nursing electives** | | **8** |
| *Interdisciplinary and related courses* | | **15** |
| *Free electives* | | **15** |
| | | **90** |

*Contact Nursing Department for available electives

*Remarks:* All general education requirements for a bachelor's degree must be met prior to graduation. Areas of concentration may be selected: anthropology, community affairs, education, health management, international affairs, political science, psychology, philosophy and religion, sociology.

## COURSE OFFERINGS

NUR 350* NURSING IN AN EVOLVING HEALTH CARE SYSTEM (3) Analysis of current trends and issues related to the evolution of nursing and nursing roles in the health care delivery system. Open to non-majors.

NUR 360* COMMUNICATION PROCESS IN NURSING PRACTICE (3) Provides an opportunity to increase the knowledge of communication processes to enhance self-understanding and interpersonal encounters in nursing practice.

NUR 370* NURSING PROCESS: AN OVERVIEW (3) Focuses on the nursing process and its application in the resolution of health problems in collaboration with consumers and health care providers. Prerequisites: NUR 350 and NUR 360, or may be taken concurrently.

NUR 380* TEACHING-LEARNING IN NURSING PRACTICE (3) Provides an opportunity for students to develop knowledge of theory and skills in the application of the teaching-learning process in nursing practice.

NUR 401 DYNAMICS OF NURSE-CLIENT INTERACTION (4) Analysis of nurse-client interaction with emphasis on theoretical concepts. Nursing Elective. Prerequisite: Registered Nurse or permission of instructor.

NUR 406 EVALUATION OF NURSING PRACTICE (4) A broad overview of the evaluation process in nursing practice for improving the quality of patient care. Nursing Elective. Prerequisite: NUR 420.

NUR 410 CRISIS INTERVENTION (3) Exploration of the current theories of crisis, the process of resolution, and the methodology of intervention. Open to non-majors.

*All 300 level courses must be taken prior to 400 level courses.

NUR 420 NURSES' ROLE IN THE PROCESS OF CHANGE (3) Examination and application of the change process, use of group dynamics and leadership roles in decision-making.

NUR 430 INTRODUCTION TO NURSING RESEARCH (3) Introduction to and application of research principles in a design of a study related to contemporary nursing problems. Prerequisite: NUR 420.

NUR 435 PROJECT IN NURSING RESEARCH (3) A course sequential to NUR 430, Introduction to Nursing Research. In NUR 430, students design a research project related to contemporary nursing; in NUR 435 students implement and report on the project designed in NUR 430. Prerequisites: NUR 420 and NUR 430.

NUR 440 INVESTIGATION OF NURSING PROBLEMS (5) Promotes critical thinking and independence, and encourages the application of the problem-solving process in an action-oriented or research project in nursing. Prerequisite: NUR 420. For Nursing Majors only.

NUR 450 ADVANCED CLINICAL CONCEPTS (5) Psycho-social and physical assessment of the health status of individuals; teaching and planning for health care in collaboration with other health team members. Supervised clinical experiences in a variety of settings. For Nursing Majors only. Senior standing. Recommended preparation: BSC 451 or 373. Prerequisite: NUR 420.

NUR 450L ADVANCED CLINICAL CONCEPTS PRACTICUUM (8) Application of Advanced Clinical Concepts theory to nursing practice.

NUR 460 COMMUNITY HEALTH NURSING (5) Basic principles of community health focusing on acquisition of knowledges, attitudes, and skills needed to promote wellness in the individual, family, and community. Supervised clinical experiences in a variety of settings. For Nursing Majors only. Senior standing. Prerequisite: NUR 450.

NUR 460L COMMUNITY HEALTH NURSING PRACTICUUM (10) Application of theory to the practice of community health nursing.

NUR 470 PERINATOLOGY: IMPLICATIONS FOR NURSING PRACTICE (4) Investigation of the physiological and psychosocial development in the perinatal and early childhood phases of the human life cycle and implications for the individual, family and community. Emphasizes preventive intervention and current developments in maternal/child health services. Prerequisite: Registered nurses.

NUR 470L PERINATOLOGY: IMPLICATIONS FOR NURSING PRACTICE (4) Application of classroom theory in a variety of clinical settings. May not be taken without NUR 470.

NUR 502 INTERNATIONAL DIMENSIONS OF NURSING AND HEALTH CARE (4) Analysis of forces that affect health care in any country with emphasis on nursing practice and education. Nursing Elective. Open to non-majors.

NUR 503 FIELD STUDY: INTERNATIONAL NURSING (4-8) On-site study of health care, nursing practice and education in another country. Registration by permission of instructor. Nursing Majors only. Recommended preparation: NUR 502.

NUR 504 ISSUES AND PROBLEMS IN NURSING ADMINISTRATION (4) Application of principles to current issues and problems in nursing administration occurring with frequency in health care settings. Nursing Elective. Open to nurses with administrative experience.

## PHYSICAL THERAPY



Accredited by the American Physical Therapy Association, the education program emphasizes a progressive, student centered approach to educating physical therapists. Students progress through a variety of learning experiences designed to develop their evaluation and applied therapeutic skills in treating musculoskeletal, neurological, cardiovascular and pulmonary disorders.

The education program is community-centered utilizing clinical physical therapists, medical physicians and other allied medical professionals to complement the teaching efforts of its faculty.

Graduates of the program are prepared to assume positions in a variety of settings, such as general hospitals, rehabilitation centers, private clinics, home health care facilities, school systems, student health and sports medicine centers; many physical therapists are self employed.

Students applying to the program must meet the general education requirements, apply both to the University and the Physical Therapy Program. Enrollment is limited, admission is selective and acceptance to the university does not assure entrance to the education program.

DEGREE: *Bachelor of Science in Physical Therapy*

LOWER DIVISION PREPARATION:

*Required Courses:* at least 90 quarter hours (60 semester hours) of acceptable college credit; at least one academic year of science coursework (with laboratory) in the area of biology or zoology, chemistry and physics; one year of psychology; a minimum grade average of 2.75 in the above required coursework, 2.75 overall GPA. (Effective 1977-78 academic year).

UPPER DIVISION PROGRAM:

| | Quarter Hours |
|---|---|
| *Required Courses:* | **118-123** |
| *Junior Year* | |
| *Fall Quarter* | **16** |
| PHT 301 Introduction to Physical Therapy | 2 |
| BSC 355 Human Gross Anatomy | 4 |
| BSC 355L Human Gross Anatomy Lab | 2 |
| BSC 350 Human Physiology I | 4 |
| BSC 350L Human Physiology Lab I | 1 |
| PHT 311 Kinesiology I | 3 |
| *Winter Quarter* | **18** |
| BSC 356 Human Gross Anatomy | 4 |
| BSC 356L Human Gross Anatomy Lab | 2 |
| BSC 351 Human Physiology II | 4 |
| BSC 351L Human Physiology Lab II | 1 |
| PHT 312 Kinesiology II | 3 |
| PHT 352 Basic Therapeutic Skills | 4 |
| *Spring Quarter* | **20** |
| BSC 357 Neuroscience | 5 |
| PHT 320 Physical Therapy and Human Disorders | 4 |
| PHT 323 Musculoskeletal Evaluation and Lab | 6 |
| PHT 333 Clinical Clerkship I | 3 |
| BSC 357L Neuroscience Lab | 2 |
| *Summer Quarter* | **17** |
| PHT 314 Orthopedic Surgery | 5 |
| PHT 317 Clinical Orthopedics | 3 |
| PHT 324 Prosthetics and Orthotics | 3 |
| PHT 354 Rehabilitation | 2 |
| PHT 334 Clinical Clerkship II | 4 |
| *Senior Year* | |
| *Fall Quarter* | **16** |
| PHT 344 Emotional Aspects of Physical Disability | 2 |
| PHT 415 Neurology | 3 |
| PHT 416 Electrodiagnosis | 4 |
| PHT 417 Clinical Neurology | 2 |
| PHT 425 Evaluation of the Developing Child | 2 |
| PHT 435 Clinical Clerkship III | 3 |
| *Winter Quarter* | **16** |
| PHT 426 Research Methods and Design | 2 |
| PHT 456 Neurophysiologic Techniques | 6 |
| PHT 436 Clinical Clerkship IV | 3 |
| PHT 447 Organization and Administration | 5 |
| *Spring Quarter* | |
| PHT 437 Internship | 11 |
| PHT 407 Independent Study | (1-6) |
| *Summer Quarter* | |
| PHT 438 Internship | 4 |

## COURSE OFFERINGS

PHT 301 INTRODUCTION TO PHYSICAL THERAPY (2) (F) A survey course of the present status of physical therapy as a health care profession.

PHT 310 APPLIED KINESIOLOGY (5) (W) A course in kinesiology that provides learning experiences to develop skills in palpation, goniometry, manual muscle testing and reflex testing of normal subjects. For Occupational Therapy students.

PHT 311 KINESIOLOGY I (3) (F) A study of the anatomical, physiological and biomechanical principles as they relate to body movement, coverage of upper extremity.

PHT 312 KINESIOLOGY II (3) (W) An analysis of movement of the extremities, back and normal human gait through self-directed learning packages and lecture-discussion sessions.

PHT 314 ORTHOPEDIC SURGERY (5) (SS) Multimedia lectures and patient case studies presented by physicians covering the orthopedic evaluation, surgical and non-surgical management of orthopedic patients.

PHT 317 CLINICAL ORTHOPEDICS (3) (SS) Correlated with Orthopedic Surgery (PHT 314), application of physical therapy evaluation, treatment and management procedures are made to patients referred to physical therapists by physicians.

PHT 320 PHYSICAL THERAPY AND HUMAN DISORDERS (4) (S) Lectures and media presentations related to human disorders typically seen with practice of physical therapy.

PHT 323 MUSCULOSKELETAL EVALUATION (6) (S) Laboratory experiences in measuring and recording the physical status of the musculoskeletal system using the manual means of palpation, movement, muscle strength testing and goniometry.

PHT 324 PROSTHETICS AND ORTHOTICS (3) (SS) A presentation of the biomechanics, anatomy, and appliances necessary to the evaluation, prescription, fabrication and use of prosthetic and orthotic devices.

PHT 333 CLINICAL CLERKSHIP I (3) (S) Supervised clinical experience within the local community designed to afford the student an ever enlarging view of physical therapy departments and their services with ever increasing responsibility of the student for the care of patients.

PHT 334 CLINICAL CLERKSHIP II (3) (SS) Extension of PHT 333

PHT 344 EMOTIONAL ASPECTS OF PHYSICAL DISABILITY (2) Examines attitudes of physical therapists toward disability, emotional reactions of patients to their own disability, and emotional disorders common to patients treated by physical therapists.

PHT 352 BASIC THERAPEUTIC SKILLS (4) (W) A study of the physiological rationale for the use of the electrophysiological modalities, therapeutic exercise and massage in a lecture and laboratory setting.

PHT 354 REHABILITATION (3) (SS) A study of functional evaluation and interpretation, treatment program planning total treatment of the severely physically disabled; cardiac and pulmonary rehabilitation programs.

PHT 407 INDEPENDENT STUDY (1-6) (S,SS,F) (By permission of Physical Therapy Faculty). The student will select a particular aspect of physical therapy or a related field for in-depth independent study.

PHT 415 NEUROLOGY (3) (F) Taught by community neurologists, the course covers the neurologic evaluation and investigation of neurological disorders typically seen by a physical therapist.

PHT 416 ELECTRODIAGNOSIS (4) (F) A study of electromyography and other electrical testing procedures pertinent to assisting physicians in the evaluation of the patient with neuromuscular disorders. Basic concepts of acupuncture are also included within the course.

PHT 417 CLINICAL NEUROLOGY (2) (F) Correlated with Neurology (PHT 415), application of physical therapy evaluation, treatment and management procedures for patients referred to physical therapists by physicians.

PHT 425 EVALUATION OF THE DEVELOPING CHILD (2) (F) A study of the neuromuscular development characteristics of the child; information necessary as prerequisite to Neurophysiologic Techniques (PHT 456)

PHT 426 RESEARCH METHODS AND DESIGN (2) (W) An introduction to research theory and methods; collection and analysis of data and methods of presentation and interpretation.

PHT 435 CLINICAL CLERKSHIPS III (3) (F) Extension of PHT 333

PHT 436 CLINICAL CLERKSHIPS IV (3) (W) Extension of PHT 435

PHT 437 CLINICAL INTERNSHIP II (S) Supervised full-time clinical experience designed to afford the student the opportunity to gain experience in the total care of patients, the administration and supervision inherent to the Physical Therapy Department, and experience in his chosen area of specialization.

PHT 438 CLINICAL INTERNSHIP (4) (SS) Extension of PHT 437

PHT 447 ORGANIZATION AND ADMINISTRATION (5) (S) A didactic course designed to provide learning experiences in the design and operation of various types of physical therapy departments.

PHT 456 NEUROPHYSIOLOGIC TECHNIQUES (6) (W) A study and application of the exercise techniques of Bobath, Rood, Brunnstrom, Knott and Voss to the treatment of children and adults with neurophysiologic deficit.

## OCCUPATIONAL THERAPY

The department offers a program of study designed to develop the student's professional understandings and skills that will be needed to assist others gain or restore their adaptive skills and performance capacity. Special attention is given to those factors which serve as impediments to the individual's ability to function effectively as well as to those factors which promote, influence, or enhance performance.

Program graduates are prepared to function professionally in hospitals and clinics, rehabilitation facilities, long-term care facilities, extended care facilities, sheltered workshops, and community agencies.

Besides meeting the requirements for admission to the university, an applicant must give evidence of general physical fitness and emotional stability. A personal interview is required.

DEGREE: *Bachelor of Science in Occupational Therapy*

LOWER DIVISION PREPARATION:

*Required courses:* one course in biology, one course in chemistry, one course in sociology, one course in basic design, one course in zoology, one course in mathematics, and two courses in psychology.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* | | **127** |
| *Junior Year* | | |
| *Fall Quarter* | | **20** |
| OCT 300 Introduction to Occupational Therapy | 3 | |
| BSC 355 Human Gross Anatomy | 4 | |
| BSC 355D Human Gross Anatomy Lab | 1 | |
| BSC 372 Intermediate Human Physiology | 5 | |
| BSC 372L Intermediate Human Physiology Lab | 2 | |
| OCT 315 Weaving | 4 | |
| OCT 325 Weaving-Therapeutic Analysis | 1 | |
| *Winter Quarter* | | **20** |
| BSC 356 Human Gross Anatomy | 4 | |
| BSC 356D Human Gross Anatomy Lab | 1 | |
| PHT 310 Applied Kinesiology | 5 | |
| OCT 316 Minor Crafts | 4 | |
| OCT 326 Minor Crafts-Therapeutic Analysis | 1 | |
| PSY 360 Theories of Personality | 5 | |
| *Spring Quarter* | | **20** |
| BSC 357 Neuroscience | 5 | |
| BSC 357L Neuroscience Lab | 1 | |
| PSY 461 Abnormal Psychology | 5 | |
| OCT 320 Pathology | 2 | |
| OCT 330 Physical Disability Theory | 5 | |
| OCT 335 Principles of Practice | 2 | |
| *Senior Year* | | |
| *Fall Quarter* | | **17** |
| TEY 320 Technology for Occupational Therapy | 5 | |
| FIA 361 Ceramics | 5 | |
| OCT 420 Psychiatric Occupational Therapy | 5 | |
| OCT 432 Disability Evaluation I | 2 | |
| *Winter Quarter* | | **18** |
| OCT 421 Psychiatric Occupational Therapy Theory | 5 | |
| OCT 431 Physical Disability Theory | 5 | |
| OCT 450 Developmental Theory | 5 | |
| OCT 433 Disability Evaluation II | 3 | |
| *Spring and Summer Quarters* | | **24** |
| OCT 460 Field Work Experience | 12 | |
| OCT 461 Field Work Experience | 12 | |
| *Fall Quarter* | | **8** |
| OCT 410 Organization and Administration | 5 | |
| OCT 440 Rehabilitation Seminar | 3 | |
| *Electives:* 5 quarter hours of electives are taken during the *second* Fall Quarter of the Senior Year | | **5** |
| | | **132** |

# COURSE OFFERINGS

OCT 300 INTRODUCTION TO OCCUPATIONAL THERAPY (3) (F) History and development of the profesaion. Philosophy of treatment.

OCT 315 WEAVING (4) (F) The study of loom and non-loom weaving techniques.

OCT 316 MINOR CRAFTS (4) (W) Study of man's creative expression through crafts.

OCT 320 PATHOLOGY (2) (S) Brief review of organ systems, primary diaaases that affect each organ with specific emphasis on the disabilities that would result from disease. Prerequisites: Anatomy, physiology.

OCT 325 WEAVING-THERAPEUTIC ANALYSIS (1) (F) Therapeutic analysis.

OCT 326 MINOR CRAFTS-THERAPEUTIC ANALYSIS (1) (W) Therapeutic analysis.

OCT 330 PHYSICAL DISABILITY THEORY (5) (S) The study of occupational therapy as related to physical disabilities. Development and status of current treatment techniques. Lecture and Lab. Prerequisites: Anatomy, physiology, kinesiology.

OCT 335 PRINCIPLES OF PRACTICE (2) (S) Introduction to processes of professional practice in treating functional limitations. Lecture and Lab.

OCT 360 SPECIALIZED FIELD SERVICE (variable) (SS) Pre-clinical experience in an approved training center to meet individual interests and needs.

OCT 410 ORGANIZATION AND ADMINISTRATION (5) (F) Administrative procedures in planning and operating an occupational therapy treatment program.

OCT 420 PSYCHIATRIC OCCUPATIONAL THERAPY THEORY (5) (F) Theories and approaches to psychological aspects of illness in the rehabilitative process. Lecture and Lab.

OCT 421 PSYCHIATRIC OCCUPATIONAL THERAPY THEORY (5) (W) Continuation of OCT 420. Prerequisite: OCT 420. Lecture and Lab.

OCT 431 PHYSICAL DISABILITY THEORY (5) (W) Continuation of OCT 330. Prerequisite: OCT 330.

OCT 432 DISABILITY EVALUATION I (2) (F) Evaluation of work potential in the cultural milieu. Lecture and Lab.

OCT 433 DISABILITY EVALUATION II (3) (W) Evaluation procedures in the testing of perceptual-motor dysfunction. Prerequisites: Anatomy, physiology, neuroscience. Lecture and Lab.

OCT 440 REHABILITATION SEMINAR (3) (F) Research in occupational therapy and related medical fields.

OCT 450 DEVELOPMENTAL THEORY (5) (W) The use of developmental theory in occupational therapy practice.

OCT 460 FIELD WORK EXPERIENCE (12) Three month internship in a physical disabilities treatment center.

OCT 461 FIELD WORK EXPERIENCE (12) Three month internship in a mental health treatment center.

OCT 462 FIELD WORK EXPERIENCE (variable) Internship in a specialized treatment area.

OCT 500 INDEPENDENT STUDY (variable)

OCT 501 CURRENT RESEARCH IN OCCUPATIONAL THERAPY (1-5) Review of statistical concepts and research procedures in the clinical setting with in-depth study of current status of research in occupational therapy.

OCT 502 CURRENT TRENDS IN MENTAL HEALTH AS RELATED TO OCCUPATIONAL THERAPY PRACTICE. (1-5) Specialized study of specific treatment theories and the application of these theories to clinical practice.

OCT 503 THE STUDY OF GERONTOLOGY AS RELATED TO OCCUPATIONAL THERAPY PRACTICE (1-5) A study of the impact of advances in the field of gerontology and current legislation on the profession.

OCT 504 EVALUATION AND TREATMENT OF PERCEPTUAL-MOTOR DYSFUNCTION (1-5) The study of specific evaluation tools and the developing treatment procedures as directly related to these tests.



## SOCIAL WORK

The program offers an integrated educational experience that combines the theoretical and practical. The primary objective of the program is to enable the student to develop competence for beginning level entry into the profession of social work. The program also prepares a student for graduate study and for participation as an informed member of the community. The program is accredited by the Council on Social Work Education.

NOTE: The curriculum of the Social Work Program is currently being revised. Therefore, the required program of study for students entering the program in September 1976 may be significantly different from that listed below. Students entering the program in 1976 may obtain full information before registration.

DEGREE: *Bachelor of Science in Social Work*

LOWER DIVISION PREPARATION:

The student desiring to major in Social Work must have completed the Associate of Arts degree from a Florida public community college or equivalent collegiate work from an accredited institution.

*Required Courses:* Before admission to the Social Work program, the student must complete courses in introductory psychology, statistics, American government, and principles of economics and two courses in sociology.

UPPER DIVISION PROGRAM:

| | Quarter Hours | | |
|---|---|---|---|
| *Required Courses:* | | | **65** |
| *Core Courses:* | | **55** | |
| SOW 301 Historical and Philosophical Perspectives of Social Welfare Services | 5 | | |
| SOW 302 Contemporary Issues and Problems in Social Welfare Policy | 5 | | |
| SOW 305 Dynamics of Human Behavior in the Social Environment | 5 | | |
| SOW 306 Self-Awareness, Self-Modification and Service | 5 | | |
| SOW 307 Social Work Practice Skills I | 5 | | |
| SOW 308 Field Experience I | 10 | | |
| SOW 401 Methods of Community Research | 5 | | |
| SOW 407 Social Work Practice Skills II | 5 | | |
| SOW 408 Field Experience II | 10 | | |
| *Courses in Another Discipline:* | | **10** | |
| *PSY 307 Human Growth and Development | 5 | | |
| PSY 321 Psychology of Racism | 5 | | |
| *or* | | | |
| ANT 403 Anthropological Approaches to Cultural Minorities | 5 | | |
| *or* | | | |
| SOC 471 Minorities (Race and Ethnic Relations) | 5 | | |
| *or* | | | |
| SOC 496 Social Conflict in Multi-Ethnic Societies | 5 | | |
| *Required only if not satisfactorily completed at the lower division level. | | | |
| *Electives (with approval of the faculty advisor):* | | | **25** |
| | | | **90** |

*Remarks:* Students should be aware that courses in this program are sequenced. Students must check with their advisor for pre- and co-requisite courses.

## COURSE OFFERINGS

SOW 301 HISTORICAL AND PHILOSOPHICAL PERSPECTIVES OF SOCIAL WELFARE SERVICES (5) (F,W,S) This course is a sequential and cumulative examination of Social Welfare and the changing role of Social Work. The focus will be creating awareness in the individual in relation to the question: How Do We Want to Live?

SOW 302 CONTEMPORARY ISSUES AND PROBLEMS IN SOCIAL WELFARE POLICY (5) (F,W,S) This course is designed to enable the student to identify urgent issues and problems as related to social welfare on a local, national and international basis.

SOW 305 DYNAMICS OF HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT (5) (F,W,S) An examination of the psychosocial foundations of Social Work practice surveying major perspectives in personality theory, adjustment, maladaptiveness, and the treatment and prevention of adjustive failures. Prerequisites: PSY 307, PSY 330 or equivalent.

SOW 306 SELF-AWARENESS, SELF-MODIFICATION AND SERVICE (5) (F,W,S) An experientially oriented course directed toward helping students become aware of their own intra-personal and inter-personal processes and how these may influence their skill and effectiveness as professional helping persons. Emphasis is on personal learning.

SOW 307 SOCIAL WORK PRACTICE SKILLS I (5) (F,W,S,SS) An overview of Social Work intervention for the beginning practitioner. Generic values, attitudes and process in client-worker relationship building will be discussed and analyzed. Authentic case material is utilized to acquaint students with assessment, modes of intervention, goal setting, and implementation. Prerequisites: SOW 305, SOW 306 or equivalent.

SOW 308 FIELD EXPERIENCE I (10) (F,W,S,SS) This is the first 240-clock hour social work practice experience in service to individuals, groups and/or communities. Placement in an agency or institution is for the purpose of gaining a first-hand awareness of needs and behavioral responses as well as a knowledge base of expectations, responsibilities, and activities involved in the delivery of social services. This experience facilitates the development of beginning social work skills, and a continually growing awareness of self as a helping person. Field seminars are required. Majors only. Prerequisites: SOW 301, SOW 302, SOW 305, SOW 306 or their equivalents. Pre- or Corequisite: SOW 307 or its equivalent.

SOW 317 TECHNIQUES OF INTERVIEWING (5) A competency-based course designed to provide students with basic interviewing skills. Emphasis placed on actual interview behavior rather than theory. Audio- and video-taping, role-playing, simulations, and micro-counseling training methods will be utilized. Prerequisites: SOW 305 or equivalent/Permission of instructor.

SOW 401 METHODS OF COMMUNITY RESEARCH (5) (F,W,S) Introduction to research design, analysis, evaluation and data collection techniques. Each student will isolate a specific community problem area in South Florida and apply the appropriate techniques that will allow a critical evaluation of the situation. Prerequisites: SOW 301, SOW 302, SOW 305, SOW 306, SOW 307, SOW 308 or their equivalent.

SOW 405 PERSON SYSTEMS IN DISTRESS (5) (S) A study of selected psychosocial, racial, ethnic and medical problems frequently encountered by Social Work practitioners. Emphasis on the development of understanding of human problems basic to formulation of effective helping strategies. Prerequisite: SOW 305 or equivalent.

SOW 407 SOCIAL WORK PRACTICE SKILLS II, GROUP WORK AND COMMUNITY ORGANIZATION (5) (F,W,S,SS) This course is designed to enable the student to develop generic Social Work practice skills in working with groups and communities. Emphasis will also be given to the present range of theoretical formulation of crisis theory and intervention. Prerequisite: SOW 307 or its equivalent.

SOW 408 FIELD EXPERIENCE II (10) (F,W,S,SS) This second 240-hour supervised social work practice experience enables the student to progress toward a higher level of awareness and understanding of needs and behavioral responses. Generic skills are applied more selectively with increasing interest and proficiency in one or more practice areas. This second placement affords the student an opportunity to become a more effective part of the social service delivery system. Field seminars are required. Majors only. Prerequisite: SOW 308 or equivalent. Corequisite: SOW 407 or its equivalent.

SOW 417 COMMUNITY ORGANIZATION (5) Provides an understanding of planned change at the community level from a Social Work perspective, as well as strategies and methods utilized in community organization practice. Identification of basic skills and prevalent models of community organization in social work practice. Prerequisite: SOW 302 or equivalent.

SOW 420 FIELD EXPERIENCE III (5-10) (F,W,S,SS) This third supervised social work practice experience makes it possible for students to sharpen diagnostic skills and to refine planning and implementation of appropriate helping techniques as these relate to individuals, groups and/or communities. Field seminars as required. Majors only. Prerequisite: SOW 408 or equivalent. Required 240 clock hours for students receiving credit for life experience for SOW 308, SOW 408 and permission of instructor required.

SOW 429 SENIOR PROJECT (1-10) (F,W,S) Under the direction of an individual from the University or community (chosen in consultation with the student's school advisor), the student will undertake to integrate an in-depth and functionally independent exploration of a problem area in which he wishes to gain a degree of expertise. Majors only. Prerequisite: SOW 401 and permission of instructor required.

SOW 480 THE SYSTEMS APPROACH IN THE SOCIAL SERVICES (5) This course will focus on "General Systems Theory" and its consequences for a revision of the world picture. Emphasis will be on the significance of the systems approach in models elaborated for social service systems. Prerequisite: Permission of instructor.

SOW 485 CRISES IN THE LIVES OF WOMEN (5) Common crises in lives of women — abortion, rape, discrimination protest, housewife syndrome, and menopause — will be examined in terms of women's newly expressed needs and values. Ramifications for relationships with men and children of various solutions to crises will be discussed.

SOW 495 INDIVIDUAL STUDY (1-10) (F,W,S) Individually selected program of supervised personal study related to specific social issues. Prerequisite: Permission of instructor.

SOW 496 DIRECTED READINGS (1-10) (F,W,S) Extensive reading and analysis of appropriate literature under faculty supervision. Prerequisite: Permission of instructor.

SOW 500 INDEPENDENT RESEARCH (1-10) (F,W,S) Individually selected program of supervised group or personal study related to a specific social work issue. Normally the product will be a research paper suitable for publication. Prerequisite: Permission of instructor.

SOW 501 EVALUATING SOCIAL SERVICE PROGRAMS I (5) Consideration of experimental and quasi-experimental designs and measurement techniques suitable for evaluation of social service programs. Discussion of political problems in program evaluation and difficulties in policy inference. Field experience included. Prerequisites: MAS 335-336, SOW 401 or equivalents.

SOW 502 EVALUATING SOCIAL SERVICE PROGRAMS II (5) Implementation of program evaluation proposal generated in SOW 501. This seminar will provide actual field experience in data collections analysis, and program evaluation report writing. Prerequisite: SOW 501.

SOW 515 TECHNIQUES OF PREVENTION AND EARLY INTERVENTION (5) This course has been designed to enable the student to learn about crisis intervention etiology, structure and theory so he/she may acquire some beginning practical knowledge in a sub-specialty. Prerequisite: Permission of instructor.

SOW 530 PROFESSIONAL VALUES IN THE HUMAN SERVICES (5) Designed to assist students in identification, exploration, and experiencing values inherent in professionalism as manifested in the human services professions. Material will be presented in a didactic and experiential manner with emphasis on student involvement in the values clarification process. Prerequisite: Senior or graduate standing.

SOW 533 UNDERSTANDING THE PROCESS OF AGING (5) This course is designed to facilitate the helping person's assessment and plan of intervention with the elderly and the multiplex problems they experience.

SOW 596 SEMINAR IN SOCIAL WORK (5) An exploration of various critical issues of concern to the Social Work profession. Prerequisite: Permission of instructor.

# SCHOOL OF HOTEL, FOOD & TRAVEL SERVICES

The School of Hotel, Food and Travel Services offers bachelors and masters programs that combine practical experience with classroom theory to assist the student gain the understandings, skills, and techniques needed to qualify for job opportunities, or to achieve his or her career goals, in the growing hospitality industry.

With the cooperation of industry executives, the School has created an internship program which literally utilizes the hotels, motels, restaurants, clubs, airlines, travel agencies and cruise lines as practice labs for students. The advanced phase of the internship program provides each student a structured and closely supervised management experience normally not available to a student until he or she has entered the industry after graduation.

An active *Industry Advisory Board* — which includes outstanding executives in the hotel, food and travel industries — works regularly with the faculty, staff and students of the School to formulate and update a curriculum that is current, flexible, and related to the needs of the hospitality industry.

The School has been designated a *Program of Distinction* by the Board of Regents. Only five programs in the entire state university system have been so honored.

## ADMISSION

### UNDERGRADUATE

Any student who has completed two years of college (60 semester hours, 90 quarter hours) may apply for admission. Full credit will be granted for both *Associate of Arts* and *Associate of Science* degrees. One may enroll on either a full-time or part-time basis.

It is not necessary to have been previously enrolled in a hotel or restaurant program. The curriculum will provide the specialized professional education to equip the student for a career in hospitality management. Students with training in Liberal Arts, Business, Education, Technology, for example, are qualified to enroll in the program.

### GRADUATE

Any student is eligible for admission to graduate study who holds a bachelors degree from an accredited institution, has attained a combined score of 1000 on the Graduate Record Examination (verbal and quantitative aptitude sections), or a "B" average in all upper division work.

A candidate for the masters degree whose undergraduate program was in Hotel and Restaurant Management must complete 45 quarter hours of graduate study plus the research project. The candidate with a bachelors degree in any other academic area must complete an additional core of professional hotel and food service courses.

The exact amount of additional work will vary with the undergraduate background of the candidate, but will not exceed 40 quarter hours including the required managerial internship program. A maximum of 15 quarter hours of graduate credit may be transferred from any other university or from the graduate programs of this University.

Additional information on admission procedures may be found in the admission section of the catalog.

## SPECIAL CERTIFICATE PROGRAM

A student who does not have the necessary two years' academic credit to qualify for degree-earning status may complete the courses listed under the major General Hospitality Management. A certificate of completion is awarded to successful candidates.

## SPECIAL STUDENTS

A number of persons currently employed in the hospitality field may not have the educational requirements to meet degree admission standards, but may be interested in enrolling in certain specific courses to improve their skills and to enhance their chances for promotion. Any person currently employed in the field may register as a *Special Student* for a maximum of 10 credit hours per quarter.

# UNDERGRADUATE STUDY

Bachelor degree programs are offered in general hospitality management; hotel and motel management; international hotel management; restaurant and food service management; tourism and travel management; condominium, cooperative, and apartment management.

DEGREE: *Bachelor of Science*

LOWER DIVISION PREPARATION:

*Required Courses:* Principles of Accounting is a prerequisite for taking course work in the accounting and finance areas. The student who has not taken this prerequisite will be required to take this course during his or her first year at the University.

*Recommended Courses:* Courses in accounting, economics, psychology and public speaking.

UPPER DIVISION PROGRAMS:

### GENERAL HOSPITALITY MANAGEMENT

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* Management Accounting, Finance & Information Systems | | **25** |
| HRM 320 Operations Control for Hospitality Industry Management | 5 | |
| HRM 360 Hospitality Accounting Information Systems | 5 | |
| *or* | | |
| HRM 361 Lodging Systems & Procedures | 5 | |
| HRM 404 Interpretation of Hospitality Financial Statements | 5 | |
| HRM 408 Financial and Legal Aspects of Real Estate Development | 5 | |
| HRM 485 Profit Planning and Decision-Making in the Hospitality Industry | 5 | |
| *Food and Beverage Management* | | **20** |
| HRM 308 Introductory Commercial Service Production | 5 | |
| HRM 311 Volume Feeding Management | 5 | |
| HRM 316 Restaurant Management | 5 | |
| HRM 318 Basic Meat Science | 5 | |
| *Administration* | | **30** |
| HRM 325 Law as Related to the Hospitality Industry | 5 | |
| HRM 328 Internship in Hospitality Management | 5 | |
| HRM 329 Advanced Internship in Hospitality Management | 5 | |
| HRM 331 Marketing of Hospitality Services | 5 | |
| HRM 340 Physical Plant Management | 5 | |
| BUA 303 Principles of Marketing | 5 | |
| *Electives:* | | **25** |
| | | **100** |

## HOTEL AND MOTEL MANAGEMENT

| | | *Quarter Hours* |
|---|---|---|
| *Required Courses:* Management Accounting, Finance & Information System | | **25** |
| HRM 320 Operations Control for Hospitality Industry Management | 5 | |
| HRM 360 Hospitality Accounting Information Systems | 5 | |
| *or* | | |
| HRM 361 Lodging Systems & Procedures | 5 | |
| HRM 404 Interpretation of Hospitality Financial Statements | 5 | |
| HRM 408 Financial and Legal Aspects of Real Estate Development | 5 | |
| HRM 485 Profit Planning and Decision-Making in the Hospitality Industry | 5 | |
| *Food and Beverage Management* | | **20** |
| HRM 308 Introductory Commercial Food Service Production | 5 | |
| HRM 311 Volume Feeding Management | 5 | |
| HRM 316 Restaurant Management | 5 | |
| HRM 318 Basic Meat Science | 5 | |
| *Administration* | | **30** |
| HRM 325 Law as Related to the Hospitality Industry | 5 | |
| HRM 328 Internship in Hospitality Management | 5 | |
| HRM 329 Advanced Internship in Hospitality Management | 5 | |
| HRM 331 Marketing of Hospitality Services | 5 | |
| HRM 425 Union Management Relations in the Hospitality Industry | 5 | |
| BUA 303 Principles of Marketing | 5 | |
| *Electives:* | | **25** |
| | | **100** |

## RESTAURANT AND FOOD SERVICE

| | | *Quarter Hours* |
|---|---|---|
| *Required Courses:* Management Accounting, Finance & Information Systems | | **15** |
| ~~HRM 360~~ Hospitality Accounting Information Systems | 5 | |
| HRM 404 Interpretation of Hospitality Financial Statements | 5 | |
| HRM 485 Profit Planning and Decision-Making in the Hospitality Industry | 5 | |
| *Food and Beverage Management* | | **25** |
| ~~HRM 308~~ Introductory Commercial Food Service Production | 5 | |
| ~~HRM 311~~ Volume Feeding Management | 5 | |
| ~~HRM 316~~ Restaurant Management | 5 | |
| ~~HRM 318~~ Basic Meat Science | 5 | |
| ~~HRM 415~~ Purchasing and Menu Planning | 5 | |
| *Administration* | | **35** |
| HRM 325 Law as Related to the Hospitality Industry | 5 | |
| ~~HRM 328~~ Internship in Hospitality Management | 5 | |
| HRM 329 Advanced Internship in Hospitality Management | 5 | |
| ~~HRM 331~~ Marketing of Hospitality Services | 5 | |
| HRM 340 Physical Plant Management | 5 | |

| | | |
|---|---|---|
| HRM 425 Union Management Relations in the Hospitality Industry | 5 | |
| BUA 303 Principles of Marketing | 5 | |
| *Electives:* (Five hours must be taken in either HRM 309 or HRM 446) 320 | | 25 |
| | | 100 |

## INTERNATIONAL HOTEL MANAGEMENT

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* Management Accounting, Finance & Information Systems | | 20 |
| HRM 320 Operations Control for Hospitality Industry Management | 5 | |
| HRM 360 Hospitality Accounting Information Systems | 5 | |
| *or* | | |
| HRM 361 Lodging Systems & Procedures | 5 | |
| HRM 404 Interpretation of Hospitality Industry Financial Statements | 5 | |
| HRM 485 Profit Planning and Decision-Making in the Hospitality Industry | 5 | |
| *Food and Beverage Management* | | 15 |
| HRM 308 Introductory Commercial Food Service Production | 5 | |
| HRM 311 Volume Feeding Management | 5 | |
| HRM 316 Restaurant Management | 5 | |
| *Administration* | | 35 |
| HRM 325 Law as Related to the Hospitality Industry | 5 | |
| HRM 328 Internship in Hospitality Management | 5 | |
| HRM 329 Advanced Internship in Hospitality Management | 5 | |
| HRM 331 Marketing of Hospitality Services | 5 | |
| HRM 340 Physical Plant Management | 5 | |
| TTM 308 International Travel and Tourism | 5 | |
| BUA 303 Principles of Marketing | 5 | |
| *Electives:* | | 30 |
| | | 100 |

## TRAVEL AND TOURISM MANAGEMENT

| | Quarter Hours | |
|---|---|---|
| *Required Courses:* Management, Accounting, Finance & Information Systems | | 15 |
| HRM 360 Hospitality Accounting Information Systems | 5 | |
| *or* | | |
| HRM 361 Lodging Systems & Procedures | 5 | |
| TTM 404 Interpretation of Travel and Tourism Management Financial Statements | 5 | |
| HRM 485 Profit Planning and Decision-Making in the Hospitality Industry | 5 | |
| *Administration* | | 25 |
| HRM 325 Law as Related to the Hospitality Industry | 5 | |
| HRM 326 Introduction to Hospitality Management | 5 | |
| HRM 331 Marketing of Hospitality Services | 5 | |
| HRM 425 Union Management Relations in the Hospitality Industry | 5 | |
| BUA 303 Principles of Marketing | 5 | |
| *Travel and Tourism Management* | | 35 |
| TTM 301 Fundamentals of Tourism | 5 | |

| | | |
|---|---|---|
| TTM 303 Retail Travel Agency Management | 5 | |
| TTM 307 Convention and Trade Show Management | 5 | |
| TTM 308 International Travel and Tourism | 5 | |
| TTM 309 Internship in Travel and Tourism Management | 5 | |
| TTM 310 Advanced Internship in Travel and Tourism Management | 5 | |
| INR 334 World Regional Geography | 5 | |
| *Electives:* (Five hours must be taken in Transportation) | | **25** |
| | | **100** |

### CONDOMINIUM, COOPERATIVE, AND APARTMENT MANAGEMENT

| | *Quarter Hours* | |
|---|---|---|
| *Required Courses:* Management Accounting, Finance & Information Systems | | **20** |
| HRM 360 Hospitality Accounting Information Systems | 5 | |
| *or* | | |
| HRM 361 Lodging Systems & Procedures | 5 | |
| HRM 404 Interpretation of Hospitality Industry Financial Statements | 5 | |
| HRM 408 Financial and Legal Aspects of Real Estate Development | 5 | |
| HRM 485 Profit Planning and Decision-Making in the Hospitality Industry | 5 | |
| *Administration* | | **30** |
| HRM 316 Restaurant Management | 5 | |
| HRM 325 Law as Related to the Hospitality Industry | 5 | |
| HRM 328 Internship in Hospitality Management | 5 | |
| HRM 329 Advanced Internship in Hospitality Management | 5 | |
| HRM 331 Marketing of Hospitality Services | 5 | |
| BUA 303 Principles of Marketing | 5 | |
| *Property Management* | | **15** |
| HRM 340 Physical Plant Management | 5 | |
| HRM 480 Condominium, Cooperative and Apartment Management | 5 | |
| HRM 481 Marketing and Servicing the Resort Condominium, Cooperative and Apartment Concepts | 5 | |
| *Electives:* | | **35** |
| | | **100** |

## GRADUATE STUDY

### HOTEL AND FOOD SERVICE MANAGEMENT

DEGREE: *Master of Science in Food Service Management*

| | *Quarter Hours* | |
|---|---|---|
| *Required Core Courses:* | | **30** |
| HRM 610 Organizational Behavior in the Hospitality Industry | 5 | |
| HRM 615 Research and Statistical Methods | 5 | |
| HRM 620 Financial Management for the Hospitality Industry | 5 | |
| HRM 625 Seminar in Hospitality Management | 5 | |
| HRM 629 Hospitality Law Seminar | 5 | |
| HRM 630 Hospitality Industry Project | 5 | |
| *Electives:* (500 and 600 level) | | **20** |
| | | **50** |

# COURSE OFFERINGS

## UNDERGRADUATE

HRM 301 INTRODUCTION TO MANAGEMENT ACCOUNTING FOR THE HOSPITALITY INDUSTRY (5) Introduction and practice in accounting processes and the principles of hospitality management accounting. Prepares the student for work in advanced accounting and financial management. Required for students who have not completed an introductory accounting course.

HRM 308 INTRODUCTORY COMMERCIAL FOOD SERVICE PRODUCTION (5) Provides an introduction to commercial food preparation, nutrition, standard product identification, storage and supervisory techniques in the area of food preparation. Course includes classroom instruction, demonstrations and actual cooking experience.

HRM 309 INTERMEDIATE QUANTITY FOOD PRODUCTION TECHNIQUES (5) An advanced commercial food production course which provides the student with the opportunity to achieve competence and to develop techniques in the garnishing, pastry, serving and convenience food areas. Prerequisite: HRM 308 or equivalent.

HRM 311 VOLUME FEEDING MANAGEMENT (5) The facilities of various types of large quantity food operations are utilized to provide the student with both production and managerial experience. Students will be rotated through production stations and, as managers, will be required to plan menus, supervise preparation and service, handle customer relations and keep accurate accounting records on the profit and loss phases of the operation. Staffing, merchandising and cost control procedures are integral parts of the course. Prerequisite: HRM 308 or equivalent.

HRM 312 IMPROVING YOUR EFFECTIVENESS AS A CONSUMER (3-5) What information does the individual consumer need to deal more effectively for goods and services? Where and how is this information obtained? These questions will be dealt with in detail. Materials intended for the student's future reference will be used. The purpose of the course is to apply modern management methods to improve individual spending decisions.

HRM 313 FOOD AND BEVERAGE TECHNOLOGY (5) A course designed to explore principles, and permit students the opportunity to master procedures, in the area of food and beverage technology.

HRM 314 CLASSICAL CUISINE (5) Provides an opportunity for students skilled in cookery to expand their knowledge of food preparation into the area of world respected, traditional dishes. The course includes lecture demonstration and actual preparation of classical dishes. The students will utilize conventional methods of preparation as well as convenience foods. Prerequisite: HRM 308.

HRM 316 RESTAURANT MANAGEMENT (5) An analysis of the principal operating problems in the restaurant field. Procedures, approaches and techniques of management are explored and developed as they relate to the various categories of restaurants ranging from fast food to gourmet. Industry leaders will present successful concepts of restaurant operation.

HRM 317 BEVERAGE MANAGEMENT (5) An introduction to the identification, use and service of wines and other alcoholic beverages with an in-depth analysis of the various elements of beverage operations including purchasing, control, merchandising and bar management. Field trips are made to hotels and restaurants to demonstrate salient operating principles.

HRM 318 BASIC MEAT SCIENCE (5) Fundamentals of meat quality, yield, utilization of cuts, availability, costing, buying, inventorying, packaging, labor and trends.

HRM 320 OPERATIONS CONTROL FOR HOSPITALITY INDUSTRY MANAGEMENT (5) Study of the management tools available to control sales and expenses within hospitality operations. Detailed analysis of the responsibility centers using a cost managing approach. Case problems provide the students the opportunity to develop control systems for food and lodging organizations.

HRM 321 CLUB OPERATIONS MANAGEMENT (5) Lecture discussion, case studies and field trips specifically designed to expose the future club manager, golf professional and turf manager to Club operations. Introduction to the Uniform System of Accounts for Clubs. Annual Club Studies of Operating Results, Control Systems, Taxation, Budgeting and Management Reports.

HRM 325 LAW AS RELATED TO THE HOSPITALITY INDUSTRY (5) A basic course in hotel, motel and restaurant law. The student is introduced to the fundamental laws, rules and regulations applicable to the hospitality industry. The case study approach is used to develop an awareness and understanding of the legal problems confronting the executive in his policy and decision making role.

HRM 326 INTRODUCTION TO HOSPITALITY MANAGEMENT (5) A survey course providing an overview of the industry, its history, problems and general operating procedures. Operating executives from the fields of hotel, restaurant, food service, travel and tourism will be featured periodically.

HRM 328 INTERNSHIP IN HOSPITALITY MANAGEMENT (5) Experience in all the major departments of an operating hotel, motel, restaurant or food service operation. Reports are required of all students.

HRM 329 ADVANCED INTERNSHIP IN HOSPITALITY MANAGEMENT (5) Structured management experience in a specialized career of the hospitality industry. Programs include: food and beverage management, rooms division management, sales management, in-flight catering management, fast food service management, and restaurant management.

HRM 330 FUNDAMENTALS OF MANAGEMENT IN THE HOSPITALITY INDUSTRY (5) A basic course in general management to acquaint the student with theories and principles of organization, the tools of managerial decision-making and the management process with particular reference to the hospitality industry.

HRM 331 MARKETING OF HOSPITALITY SERVICES (5) Application of marketing principles to business operations within the hospitality industry with particular emphasis on viewing marketing as a competitive strategy in domestic and international markets. Prerequisite: BUA 303 or equivalent.

HRM 332 ADVERTISING FOR THE HOSPITALITY INDUSTRY (5) Consideration of all aspects of the advertising element of the promotion mix to execute the corporation's or tourist destination's marketing strategy. Prerequisite: HRM 331.

HRM 333 SALES MANAGEMENT FOR THE HOSPITALITY INDUSTRY (5) The course focuses on organizing the sales and servicing effort and executing the marketing strategy by developing sales strategies, plans and tactics for hospitality corporations and tourist destinations. Special emphasis is placed on developing group markets

and gaining travel retailer support for destinations, hotel corporations and cruiselines. The course may be followed by a sales management internship. Prerequisite: HRM 331.

HRM 339 HOSPITALITY PROPERTY MANAGEMENT (5) The problems of cost and operation of: pest control, security, parking, general cleaning and upkeep, laundry, fire prevention, pools, tennis courts and care of guest rooms and public space with emphasis on cost of equipment and personnel with modern innovations that are available.

HRM 340 PHYSICAL PLANT MANAGEMENT (5) A comprehensive survey of the engineering, maintenance and efficiency control in hotels, restaurants and institutions.

HRM 341 HOTEL AND RESTAURANT PLANNING AND DESIGN (5) Considers analysis, evaluation and scheduling of the economic, technical, aesthetic and merchandising factors involved in the planning, programming and design stages of hotels and restaurants. Actual hotel and restaurant projects will serve as the basis for discussion and student project work.

HRM 360 HOSPITALITY ACCOUNTING INFORMATION SYSTEMS (5) The study of an accounting system for hospitality operations within the context of the firm's overall information system. The flow of data from source inputs through financial statement preparation, with emphasis on computer assisted processing and reporting techniques. Students use the University computer for a case project. Prerequisite: HRM 301 or equivalent.

HRM 361 LODGING SYSTEMS AND PROCEDURES (5) Detailed examination of the functions and procedures utilized in servicing the guest of a lodging establishment, contrasting the traditional techniques and the modern systems that have been developed. Extensive use of the School's Mobydata minicomputer hospitality system to demonstrate "state-of-the-art" concepts. Prerequisite: HRM 301 or equivalent.

HRM 398-399-400 INDEPENDENT STUDIES (VAR) With permission from the Chairmen of the Division of Hotel and Restaurant Services, or Division of Travel Services, students may engage in independent research projects and other approved phases of independent study.

HRM 401 SEMINAR IN HOSPITALITY INFORMATION SYSTEMS (5) A study of the information systems utilized in hospitality operations to provide better management information for analysis and decision-making. Industry participants afford students the opportunity to study and evaluate their information system. This forms the basis for their course project. Research, case problems, class analysis and discussion. Prerequisite: Permission of the instructor.

HRM 404 INTERPRETATION OF HOSPITALITY INDUSTRY FINANCIAL STATEMENTS (5) In-depth study of hospitality industry financial statements including consideration of the significant relationships between the various accounts found on financial reports. The statement of changes in financial position is studied emphasizing funds as a means of payment. Major emphasis is placed upon trend analysis, ratio analysis and comparison analysis using hospitality industry annual studies. Prerequisites: HRM 320 and HRM 360 or HRM 361.

HRM 405 FUNCTIONS OF THE HOSPITALITY INDUSTRY COMPTROLLER (5) A specialized course designed for students desiring strong emphasis and training in the complex accounting and finance functions of hospitality industry management. Prerequisites: HRM 360, HRM 320.

HRM 406 COMPUTER SYSTEMS FOR HOSPITALITY INDUSTRY MANAGEMENT (5) A seminar on computer systems and their applications within the hospitality industry. Consideration is given to an understanding of the basic computer hardware and software concepts needed for a manager to communicate with data processing personnel. Prerequisite: HRM 360.

HRM 407 SEMINAR IN TAXPLANNING FOR THE HOSPITALITY INDUSTRY (5) Develops tax awareness and the ability to recognize the possible tax implications of business decisions. Tax considerations are studied for existing, expanding and planned hospitality operations. Included are compensation plans, pension and profit sharing plans, depreciation methods, acquisitions, mergers, liquidations, organization structure, accounting methods and capital gains and losses. Prerequisite: Permission of the instructor.

HRM 408 FINANCIAL AND LEGAL ASPECTS OF REAL ESTATE DEVELOPMENT (5) An introductory course designed to acquaint the student with the legal aspects of financing in the hospitality industry. The student is exposed to the sources and availability of hospitality financing. Financing from the viewpoint of a sole proprietorship, partnership and corporation is discussed. The course also covers the purchasing and leasing of hospitality properties, condominium and cooperative forms of ownership and franchising.

HRM 410 INSTITUTIONAL FOOD SERVICE MANAGEMENT (5) This course brings together basic management techniques and controls that are useful in the area of institutional feeding programs. Federal and State governments' regulations studied. Special emphasis is given to Hospital Food Service Direction and the National School Lunch Program.

HRM 411 IN-FLIGHT FOOD SERVICE MANAGEMENT (5) An introduction to the concepts and managerial techniques specifically related to the In-Flight Food Service segment of the hospitality industry. Students will be exposed to a comprehensive study of contract purchasing, contract negotiations, system menu planning, volume food production, staff scheduling, industry pricing methods, product specification factors, client and employee relations, security control systems, familiarization with specific and specialized food service equipment, equipment routing and balance, and transportation methods and procedures.

HRM 415 PURCHASING AND MENU PLANNING (5) Basic information on sources, grades and standards, criteria for selection, purchasing and storage for the major foods including the development of specifications. Consideration of the menu pattern with particular emphasis on costing, pricing, and the work load placed on the production staff. Item analysis and merchandising features are emphasized.

HRM 416 SANITATION IN FOOD SERVICE OPERATION (5) The causes and prevention of food poisoning are stressed. Emphasis is placed on the current problems confronting the industry with recent food developments as they relate to sanitation. Curriculum developed by the National Sanitation Foundation is included.

HRM 418 ADVANCED MEAT SCIENCE (5) An advanced course which considers the variable factors of meat, poultry and fish utilization. Emphasis is placed upon newer techniques in purchasing, maximizing yields and providing products in unique form. The use of TVP and other analogs are considered as are the functions of the specialized commissary type of meat processing plants. Guest speakers will be utilized and field trips to protein processing plants will be made to emphasize major points. Prerequisite: HRM 318.

HRM 419 RESTAURANT MANAGEMENT SEMINAR (5) By permission of Instructor only. A senior course reviewing current problems and practices, developing policies and procedures and implementing same.

HRM 421 MONEY MANAGEMENT FOR THE HOSPITALITY INDUSTRY (5) Various methods of investment analysis, investment opportunities and pitfalls with special emphasis on securities of and investments in the Hospitality Industry.

HRM 425 UNION MANAGEMENT RELATION IN THE HOSPITALITY INDUSTRY (5) A comprehensive course covering labor legislation, union history and the day-to-day administration of the labor contract. Emphasis is placed on collective bargaining and the business relationships between union and management.

HRM 427 RESORT MANAGEMENT (5) A course designed to focus on the unique problems of resort hotel management and the application of special techniques to meet these problems.

HRM 428 HUMAN RELATIONS IN THE HOSPITALITY FIELD (5) The problems faced by the supervisor and the executive in managing the human element in the hospitality field. Designed to give the student insight into the varied social and psychological factors present in any employee-employer relationship.

HRM 435 FOOD AND BEVERAGE MERCHANDISING (5) This is an application of marketing and advertising principles to the specific area of food and beverage for hotels and restaurants.

HRM 446 FOOD FACILITY LAYOUT AND DESIGN (5) Defines and explains concepts, principles and procedures in evaluating and/or developing varied commercial food service facilities that will increase profit by reducing investment and operating cost and/or increasing capacity. Actual installations are intensively reviewed, current trends in food service methodology and technology are studied in detail and food service equipment manufacturing processes and distribution economics are observed and evaluated.

HRM 450 ORGANIZATION AND DEVELOPMENT OF RESORT, CONDOMINIUM, COOPERATIVE AND RESIDENTIAL COMPLEXES (5) This seminar deals with the legal and financial aspects of real estate. Various instruments of real estate financing are examined. Students are exposed to land contracts, long and short term leases, real estate bonds, and various facets of investment trusts. Permission of the instructor must be obtained to take the course. Prerequisite: past course work or experience in the real estate industry.

HRM 480 CONDOMINIUM, COOPERATIVE AND APARTMENT MANAGEMENT (5) A survey course delineating the management functions of the resort condominium complex with special emphasis on similarities and differences in comparison to hotel and resort management.

HRM 481 MARKETING AND SERVICING THE RESORT CONDOMINIUM, COOPERATIVE AND APARTMENT CONCEPTS (5) A simulated case project taking each of the three types of properties from selection of site completely through all phases of sales, marketing and servicing to complete occupancy and day-to-day operation.

HRM 485 PROFIT PLANNING AND DECISION MAKING IN THE HOSPITALITY INDUSTRY (5) Study of the decision-making process involved in the development of profit plans through analysis of hospitality industry studies. The establishment of short and long term goals and the means to reach these goals through profit plans. Emphasis on pricing decisions, responsibility centers, variance analysis, cost-volume profit analysis, capital budgeting and tax considerations. Prerequisite: HRM 404 or TTM 404.

HRM 500-504 INDEPENDENT STUDIES (VAR) With permission from the Chairmen of the Division of Hotel and Restaurant Services, or Division of Travel Services, students may engage in independent research projects and other approved phases of independent study.

HRM 509 FEASIBILITY STUDIES FOR THE HOSPITALITY INDUSTRY (5) A survey of various theories and techniques available by which management may determine the financial feasibility of investments in the hospitality field. Prerequisites: HRM 331 and HRM 485 or concurrently enrolled.

HRM 510 SEMINAR IN HOSPITALITY INDUSTRY FINANCIAL MANAGEMENT SYSTEMS (5) Visits to various hospitality businesses for seminars with management team members. Lectures, demonstrations and discussion of each operation's methods and procedures with emphasis on accounting and control systems. Prerequisite: Permission of the instructor.

HRM 533 PROBLEMS IN MARKETING (5) Team-work analysis and recommended solution of an actual marketing problem which has been posed by a local operator. Prerequisite: HRM 331.

HRM 536 ADVANCED FOOD SERVICE OPERATION (5) A senior course designed to coordinate the various management functions covered in previous courses into a comprehensive approach to profitable food service operations.

TTM 301 FUNDAMENTALS OF TOURISM (5) An introduction to the broad fields of travel and tourism. Among the topics covered are cultural tourism, sociology of tourism, tourism components and supply, tourism development, the economic role of tourism, tourism demand, and the marketing of tourism.

TTM 303 RETAIL TRAVEL AGENCY MANAGEMENT (5) An introduction to the basic operations aspect of travel agency management. The application of fundamental principles and successful practices in developing a satisfied clientele.

TTM 304 TECHNICAL AGENCY OPERATIONS (5) Comprehensive, detailed course covering the technical procedures, practices and systems of day-to-day travel management. The counseling, sales and personal relationships with clients, hotels, tour agencies and transportation systems. Prerequisite: TTM 303.

TTM 305 PASSENGER TRAFFIC MANAGEMENT (5) A survey of land, water and air transportation from an integrated, intermodal frame covering organization, operations, financing, research, regulation, economics and certain social and political factors, as well as contribution made by each mode to the development of tourism.

TTM 306 CREATIVE TOUR PACKAGING (5) A thorough study of the functions of the wholesale tour operation. Includes tour operations and development, sales methods used in selling group business, costing and contracting of group business and in-depth study of the promotional aspects of tour packaging.

TTM 307 CONVENTION AND TRADE SHOW MANAGEMENT (5) A course concentrating on organizing, arranging and operating conventions, trade shows, and concessions. Emphasis will be placed on the modes and methods of sales used in booking conventions and trade shows as well as the division of administrative responsibility in their operation.

TTM 308 INTERNATIONAL TOURISM AND TRAVEL (5) An introduction to the complete international scope of travel and tourism. A brief analysis of regional framework and specific regions of the world; the interrelationship between human society and the physical environment. Tourism as a factor in economic development and its cultural and sociological factors are explored. An analysis of the international organization of tourism and the facilitation procedures required for its successful implementation are highlighted.

TTM 309 INTERNSHIP IN TOURISM AND TRAVEL MANAGEMENT (5) Experience in all phases of travel agency management and in the travel and sales area of major airlines. Reports are required.

TTM 310 ADVANCED INTERNSHIP IN TOURISM AND TRAVEL MANAGEMENT (5) Structured management experience with an airline, a travel agency, tour operator or cruise line. Report required.

TTM 312 SOCIOLOGY OF LEISURE (5) An introduction to the fundamental, psychological and sociological concepts and theories as they relate to the motivation behind travel and tourism. Emphasis will be placed on the biological basis on behavior and the dynamics of personality.

TTM 404 INTERPRETATION OF TOURISM AND TRAVEL MANAGEMENT FINANCIAL STATEMENTS (5) In-depth study of financial statements including consideration of the significant relationships between the various accounts found on financial reports. Use of a uniform system, reports analyses and data interpretation as tools for the travel and tourism organization manager. Major emphasis is placed upon trend analysis, ratio analysis and comparison analysis using industry studies. Prerequisite: TTM 360.

## GRADUATE

### Core Courses

HRM 610 ORGANIZATIONAL BEHAVIOR IN THE HOSPITALITY INDUSTRY (5) A survey of the concepts of organizational behavior and industrial psychology theory from both the research and practical points of view. The course is designed to assist students in making sound decisions in the hospitality area by making them sensitive to the organizational parameters which influence their decisions.

HRM 615 RESEARCH AND STATISTICAL METHODS (5) A study of basic research methodology as applied to a variety of hospitality industry research projects. Technique for data collection, interpretation and methods of reporting are considered.

HRM 620 FINANCIAL MANAGEMENT FOR THE HOSPITALITY INDUSTRY (5) A study of the principles of financial management and their application to the hospitality industry. Discussion and case studies are used to develop plans for meeting financial needs (short, intermediate and long term) from internal sources or capital markets. Attention is focused on capital budgeting, leasing, franchising, mergers, consolidations and current financial issues in the hospitality industry.

HRM 625 SEMINAR IN HOSPITALITY MANAGEMENT (5) Attention is focused on major problems facing management in today's economy. Special emphasis is placed on the food service industry. Research of the current literature, class analysis and discussion.

HRM 629 HOSPITALITY LAW SEMINAR (5) New laws and their impact on the hospitality industry are examined. Students research and publish "industry alert bulletins" explaining the impact of new legislation on the hospitality industry. Prerequisite: HRM 325 or equivalent.

HRM 630 HOSPITALITY INDUSTRY PROJECT (5) An individualized research project dealing with current problems in the hospitality industry. Topics and research methods must be approved by the graduate faculty before registration for the course.

### Electives

HRM 600-602 INDEPENDENT STUDIES (VAR) With permission from the Chairmen of the Division of Hotel and Restaurant Services, or Division of Travel Services, students may engage in independent research projects and other approved phases of independent study.

HRM 606 ADVANCED FOOD SERVICE DESIGN OPERATIONS (5) Advanced planning, programming and project documentation for commercial food service facilities. Spatial, environmental and electro-mechanical design factors are stressed with particular emphasis on efficiency modulation and investment aspects. Recommended: HRM 341 or HRM 446.

HRM 621 INVESTMENT ANALYSIS FOR THE HOSPITALITY INDUSTRY (5) Advanced investment methods and opportunities with emphasis on securities of the hospitality industry, financing techniques, syndication, negotiations.

HRM 626 SEMINAR IN MANAGEMENT METHODS (5) Class will be divided into small groups, each of which will meet regularly with the executive committee of an area hotel or restaurant. Each group will be, in reality, the junior executive committee for the property. The groups will come together periodically for analysis and discussion of their experiences, and to relate their experiences to principles of modern management.

HRM 628 GRADUATE INTERNSHIP (5) Structured graduate management experience in a specialized career of the hospitality industry. Programs include: food and beverage management, room division management, sales management, in-flite catering management, fast food service management and restaurant management. Prerequisite: Permission of the instructor.

HRM 629 HOSPITALITY LAW SEMINAR (5) New laws and their impact on the hospitality industry are examined. Students research and publish "industry alert bulletins" explaining the impact of new legislation on the hospitality industry. Prerequisite: HRM 325 or equivalent.

HRM 635 INTERNATIONAL HOTEL OPERATIONS (5) A consideration of the various environments within which the international hospitality firm operates. Organizational, financial and marketing factors are of major concern. Emphasis is placed on those problems and constraints which are uniquely different from problems of firms engaged in domestic operations of a similar nature.

HRM 640 THE ORGANIZATION AND ITS ENVIRONMENT (5) A study of the hospitality industry as it is affected by its environment and in turn attempts to influence the various elements in this environment.

HRM 645 HOSPITALITY INDUSTRY ORGANIZATIONAL INFORMATION SYSTEMS (5) Study of information systems in the hospitality industry. Consideration of the design and development of an information system based on user needs. Emphasis on identification and specification of user requirements and the selection of the appropriate design. Students work on a systems development project.

HRM 650 TAXATION FEDERAL AND STATE (5) A study of state and federal taxation concepts, including tax management for individuals, partnerships, and corporations engaged in the hospitality field.

HRM 660 MARKETING MANAGEMENT (5) Team-work analysis and recommended solution of an actual marketing problem which has been posed by a local operator.

HRM 665 OPERATIONS CONTROL (5) Focus is directed to the information used in the decision process and the information flow associated with each decision process throughout hotels or restaurant enterprises.

HRM 670 MOTIVATION AND LEADERSHIP (5) Motivation, perception, learning, attitude formation, incentive theory, job satisfaction with emphasis on leadership and group task performance.

HRM 675 FOOD SERVICE RESEARCH (5) The planning, executing, and reporting of an individual research project dealing with significant problems in food service. Students demonstrate an understanding of research techniques through data collection, evaluation and interpretation.

HRM 680 FOOD SERVICE SYSTEMS (5) Principles of system analysis applied to the food service industry. Attention is given to the organization of modern food production, preparation, and distribution systems. Case study problems require application of economic and management principles for solution.

MAR 612 MARKETING RESEARCH (5) The role of research in providing information for marketing decision-making including an examination of the research process and the tools available to the researcher.

MBA 625 MANAGERIAL DECISION THEORY (5) This course will investigate and analyze the decision problems that managers face in business, volunteer organizations, government, and the public sector. Emphasis in the course will be placed on providing variety of decision-making experiences for the student, including the opportunity of participating in a management computer game.

MBA 699 POLICY ANALYSIS (5) The use of cases, guest lecturers, and gaming to integrate the analysis and measurement tools, the functional areas and public policy issues. The objective is to develop skill in broad areas of rational decision-making in an administrative context of uncertainty. Prerequisite: should be taken in the last quarter of Master's Program.

# SCHOOL OF TECHNOLOGY

The School of Technology offers programs leading to the bachelors degree in each of four fundamental technical fields: engineering technology, industrial technology, construction, and environmental technology and urban systems.

## PROGRAMS

The programs of the School are directed toward the *practical application* of scientific, engineering and technical principles to the objectives of industry, business and the public. Programs range from those oriented toward careers in industrial management and supervision to those more directly associated with the sciences, mathematics and engineering or architecture, and are characterized by their emphasis on real applications, industrial operations and service. The School attempts to provide each student with the opportunity to develop marketable skills and to obtain an education which will prepare him or her for a rewarding career and satisfying personal growth.

Underlying the programs of the School is a recognition of the growing impact of technology upon the quality of life and that the proper application of technology is critical to meeting current and emerging needs of man.

The academic programs of the School are provided by its four divisions and are described below. Each division has several specified majors as well as a non-structured divisional major to meet the needs of individuals.

## BACHELOR DEGREES

The School awards the *Bachelor of Science* degree (B.S.) to any student who completes the prescribed requirements in an Engineering Technology program (Electrical, Mechanical, Civil, Construction, Environmental, Urban Systems), Construction Management, Architectural Technology or Interior Design. A student who elects a non-structured divisional major (Industrial, Construction, Engineering Technology, Environmental and Urban Systems) may qualify for the *Bachelor of Science* degree or the *Bachelor of Technology* (B.T.) degree depending on the nature of his or her individualized program of study.

## GENERAL DEGREE REQUIREMENTS

In order to obtain a bachelors degree from the School of Technology, each student must satisfy the following minimum requirements:

1. Obtain a minimum of 180 quarter credits including transfer credits. Some students require more than the minimum program in order to obtain the competencies and objectives of their selected major.
2. Take at least 45 credits in the School of Technology.

3. Satisfy the general education requirements for the bachelor degree by taking those courses at the community college or by a combination of transfer, CLEP and course credits awarded at the University. A student in an Engineering Technology program must normally obtain additional electives in the humanities and social sciences at the upper division in order to meet program objectives.
4. Satisfy the particular requirements for his or her own major and all University requirements for graduation.
5. Complete an approved *program of study* which must be filed with the advisor by the time he or she attains senior status (135 cr.) or at least two quarters prior to application for graduation.
6. Have proficiency in the use of language and mathematics appropriate to his or her program and career objectives.

## COOPERATIVE EDUCATION

A Co-op Program is conducted by the School of Technology in conjunction with the Department of Cooperative Education in the Division of Student Services. In this program, a student spends alternate quarters in school full-time and fully employed in industry in a technical position directly related to his or her major. Academic credit (normally, 5 credits per quarter) is given for the work periods, which counts toward the degree. The student receives full pay for his or her work in industry. Placement in co-op positions is arranged by the Co-op Program and includes both local and national industrial, business and governmental agencies. A Co-op student normally must agree to spend at least three work periods in industry and can normally complete the upper-division program within two calendar years. An applicant for the Co-op Program is evaluated by the School of Technology. An interested student should contact the Associate Dean. Because of the requirement for three work periods, a student should enter the program during the first quarter of the junior year. Inquiries from lower-division students prior to transfer to the University are particularly encouraged since work periods may be arranged immediately upon enrollment.



## EXTERNAL DEGREE

The School participates in the External Degree Program of the University. The External Degree student may enroll in a division major. Because of the technical and laboratory requirements of most programs, the School will consider admission of a student to its External Degree Program only under these conditions:

1. Completion of two years of college, preferably with a technical associate degree.
2. The *inability* to attend the regular program.
3. Substantial work experience, with increasing responsibility, in the technical discipline of the proposed major.
4. A favorable evaluation of the probability of completing the program and the availability of the necessary resources (at this University and at an external site) for the program.

## ADMISSIONS AND PROGRAM PLANNING

### ADMISSION REQUIREMENTS

All bachelors degree programs of the School are designed to integrate the community college graduate (or junior-level transfer student) into curricula which have established certain minimum competencies or skills as the requirements for the four-year degree. Consequently, requirements may be met in a variety of ways and through various sequences which are accommodated at the freshman and sophomore level by College Parallel (A.A.) and Technical (A.S.) programs of the community colleges and by four-year colleges. The School admits to full junior standing a student who meets one of the following requirements:

1. *Associate of Arts* degree from an accredited community college, or . . .
2. *Associate of Science* degree from an accredited community college in a technical discipline (the student with a non-technical A.S. degree should consult the Dean's Office for assistance and may be admitted to certain programs), or . . .
3. Junior level (90 cr.) in good standing at a four-year college.

Others will be considered as exceptions on an individual basis. A student transferring with the *Associate* degree (A.A. or A.S.) is normally awarded 90 transfer credits toward the bachelors degree. A transfer student from a four-year college may not receive more than 135 credits of transfer toward the bachelors degree. The transferability of upper-level technical courses is determined by the advisor and is a part of the establishment of the student's program of study.

A student earning the *Associate of Science* degree should attempt to obtain as many of the general education requirements as possible at the community college, preferably to completion and certification, by selection of electives. For transfer purposes, the School views all *Associate of Arts* degree programs equally. However, the college parallel student planning to major in Technology in this School should select a pre-professional or pre-science major if it is available or should take math, science and related electives in order to insure rapid progress after transfer.

## PROGRAM OF STUDIES

The requirements for the various majors in Technology are described in terms of fundamental competencies which may be met through specified courses at the University or demonstrated in other ways. These alternative demonstrations include completion of equivalent courses at other colleges, significant and varied work experience, and non-traditional learning experiences. Since each student will meet requirements in a unique way, based on his or her individual background and experience, each student is *required* to arrive at a *program of study* which establishes the specific requirements for his or her degree. The program of study must be approved by both the advisor and student and must be completed by the time the student reaches senior standing (135 hours) or at least two quarters prior to application for graduation. A student who does not comply with this requirement will delay his or her graduation.

## DIVISIONAL MAJORS

Each division offers a non-structured divisional major in addition to its specified majors. The student selecting a divisional major develops an individualized program of study with an advisor which becomes the degree requirement after it has been approved by the School. A division major must satisfy all the graduation requirements of the School and University in a *planned* program. The School assumes no responsibility to apply courses to a division major which are taken prior to formal approval of a program of study. The divisional major is provided to meet special needs; consequently, most students will be enrolled in the specified majors and the School of Technology does not approve a division major unless special needs exist which it can meet. All students in Industrial Technology enroll in the divisional major and receive individualized programs of study. In order to obtain the *Bachelor of Science* degree in a division major, the student must normally complete a program including substantial coursework in mathematics, science and related technology. Others receive the *Bachelor of Technology* degree. Determination of the degree to be awarded is a part of the preparation of the program of study.

## STUDENT ADVISORS

A student who has been accepted to a degree program in the School of Technology must obtain and consult an advisor *prior* to the first class enrollment. The advisor assignment may be obtained by contacting the Office of the Dean or the Director of the Division in which an academic major is desired. Continued contact (at least once per quarter) with the advisor is urged in order to review progress and

register. Such contact is *required* until an approved program of study is completed. Special advising problems or the student who is undecided about a technology major may be referred to the Associate Dean.

### CREDIT FOR EXPERIENCE

The School will consider awarding credit-for-life experience of three basic types:

A. Compressed courses or training programs such as college seminars, short courses, company seminars, company schools, union apprenticeship schools, and military technical schools.

B. Regular courses taken from technical institutes or other institutions where normal transfer credit is not applicable.

C. Work experience wherein the student gains applicable skills and knowledge.

Such credit may be awarded through examination or evaluation of work products. Evaluation of credit-for-life experience is, of necessity, a very rigorous process with awards given only for significant experiences that are fully documented and directly applicable to the student's program. Normally, evaluation is based on equivalency to courses required for graduation and credit is limited to a maximum of 25 quarter hours. A student must be fully accepted to a degree program and normally should have completed at least two quarters of upper-division work (25 hrs.) prior to evaluation of life experience for credit. The student wishing consideration for such credit should discuss it with his or her advisor.

### ACADEMIC APPEAL

The School endeavors to provide an atmosphere in which the special needs of each student are served. In the event that a student has difficulty in a class or curriculum matter, this should be immediately brought to the attention of the instructor or advisor involved. If resolution is not possible in this way, the student should call the matter to the attention of the director of the division responsible. If the problem still cannot be resolved, the student may appeal to the Dean of the School by stating the grievance in writing and requesting a review. The Dean may hear an appeal or refer the matter for consideration to an Appeals Committee appointed for that purpose.

## SPECIAL FEATURES

The School is actively engaged in a number of special programs as a service to the community and the University. Among these activities are the support of the Technical/Vocational Education and Home Economics programs in technology-related service coursework. The Division of Construction hosts the *International Association for Housing Science,* an organization with membership from more than twenty nations dedicated to improving housing technology and production, as well as studying the inter-disciplinary aspects of housing. The Division of Environmental Technology and Urban Systems has developed and supports a Potamological Laboratory on the Miami River for environmental research activities and to provide assistance to the community in the preservation of that critical natural resource. The School provides numerous special courses and training institutes in cooperation with the Division of University Services and Continuing Education. Technology faculty are actively engaged with business, industry and government seeking the solution to technical and operational problems. They are participating in a variety of applied research projects in such areas as energy, low-cost housing, transportation, solid waste disposal and water resources.

## CONSTRUCTION DIVISION

The Construction Division of the School is dedicated to a multi-disciplinary approach to the construction industry. By selecting from the fields of engineering, architecture and management, its programs develop a system of skills applicable to the complex and interrelated problems of development, construction and structures. As one of the major factors in our economy, the construction industry also plays a

direct role in our quality of life and occupies a position of major concern in the curriculum of the University.

The Construction Division has five specific majors and the divisional major: Civil Engineering Technology, Construction Engineering Technology, Construction Management, Architectural Technology and Interior Design.

## CIVIL ENGINEERING TECHNOLOGY

This program emphasizes a broad range of knowledge and skills necessary to participate in major projects such as construction, design and analysis of highways, waterways, buildings, transportation facilities, public works and development.

DEGREE: *Bachelor of Science: Civil Engineering Technology*

LOWER DIVISION PREPARATION: academic credit or proven competency in the following areas: mathematics through calculus, physics, surveying, construction materials, engineering drawing, statics.

*Remark:* A student without the above skills may obtain them while completing his or her upper division program.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Major Requirements:** | | **74** |
| CSN 305 Advanced Surveying | 5 | |
| CSN 326 Codes and Specifications | 5 | |
| CSN 352 Strength of Materials | 3 | |
| CSN 353 Determinate Structural Analysis | 3 | |
| CSN 354 Soil Mechanics and Foundations | 5 | |
| CSN 357 Indeterminate Structural Analysis | 3 | |
| CSN 407 Site Development | 5 | |
| CSN 413 Introduction to Geometric Design of Highways | 5 | |
| CSN 451 Steel Design | 5 | |
| CSN 455 Reinforced Concrete Design | 5 | |
| ITE 300 Industrial Financial Decisions | 5 | |
| MAS 311 Introduction to Computers | 5 | |
| WQT 320 Applied Hydraulics | 5 | |
| ETS 370 Introduction to Environmental Technology Systems | 5 | |
| ITE 485 Engineering Economy | 5 | |
| MET 351 Dynamics | 5 | |
| *or demonstrated competency | | |
| *Electives:* selected with an advisor to meet objectives. | | **16** |
| | | **(Minimum) 90** |

Including both lower and upper division course work each student must complete a minimum of 34 quarter hours in communications, social science, and humanities, and a minimum of 34 quarter hours in basic science and mathematics (general requirements).

## CONSTRUCTION ENGINEERING TECHNOLOGY

This program offers a specialized treatment of the construction process. The emphasis is placed on technical courses in fundamentals of construction, management of personnel and equipment, inspections, mechanical and structural design, construction economy, construction materials, construction methods, system analysis, conceptual study and operations research skills.

DEGREE: *Bachelor of Science: Construction Engineering Technology*

LOWER DIVISION PREPARATION: academic credit or proven competency in the following areas: mathematics through calculus, physics, surveying, construction materials, engineering drawing, statics.

*Remark:* A student without these skills may obtain them while completing his or her upper division program.

UPPER DIVISION PROGRAM:

| | Quarter Hours |
|---|---|
| *Major Requirements:** | **67** |
| CSN 305 Advanced Surveying | 5 |
| CSN 306 Construction Methods and Equipment | 3 |
| CSN 320 Construction Cost Estimating | 5 |
| CSN 322 Construction Costs and Scheduling | 5 |
| CSN 326 Codes and Specifications | 5 |
| CSN 328 Building Systems | 5 |
| CSN 330 Management of Construction Projects | 3 |
| CSN 352 Strength of Materials | 3 |
| CSN 353 Determinate Structural Analysis | 3 |
| CSN 354 Soil Mechanics and Foundations | 5 |
| CSN 407 Site Development | 5 |
| CSN 457 Structural Design | 5 |
| ITE 300 Industrial Financial Decisions | 5 |
| MAS 311 Introduction to Computers | 5 |
| MET 360 Mechanical Systems in Construction | 5 |
| *or demonstrated competency | |
| *Electives:* Selected with an advisor to meet degree requirements and program objectives (minimum required) | **23** |
| | **(Minimum) 90** |

## CONSTRUCTION MANAGEMENT

This program consists of courses from disciplines related to the construction industry. The emphasis is placed on technical management essentials such as cost estimating, project field management and operations, methods and equipment, codes and specifications, contract administration, job planning, scheduling, inspections, site development, construction materials, construction economics, cost control, labor relations and safety.

DEGREE: *Bachelor of Science: Construction Management*

LOWER DIVISION PREPARATION: academic credit or proven competency in the following areas: algebra and trigonometry, surveying, construction materials, drawing or drafting.

*Remark:* A student without these skills may obtain them while completing his or her upper division program.

UPPER DIVISION PROGRAM:

| | Quarter Hours |
|---|---|
| *Major Requirements:** | **72** |
| CSN 306 Construction Methods and Equipment | 3 |
| CSN 320 Construction Cost Estimating | 5 |
| CSN 322 Construction Costs and Scheduling | 5 |
| CSN 326 Codes and Specifications | 5 |
| CSN 330 Management of Construction Projects | 3 |
| CSN 331 Economic Planning for Construction | 5 |
| CSN 332 Legal Aspects of Construction | 3 |
| CSN 350 Mechanics of Materials | 5 |
| CSN 400 Road Construction | |
| *or* | |
| CSN 402 Heavy Construction | 5 |
| CSN 407 Site Development | 5 |
| CSN 426 Construction Labor Laws | 3 |
| CSN 429 Quality Control in Construction | 5 |
| CSN 450 Structural Systems | 5 |
| ITE 300 Industrial Financial Decisions | 5 |
| ITE 485 Engineering Economy | 5 |
| ITE 351 Construction Safety | 5 |
| *or demonstrated competency | |

*Electives:* selected with an advisor to meet degree requirements and program objectives (minimum required). 13

**(Minimum) 90**

## ARCHITECTURAL TECHNOLOGY

This program gives the student a multi-disciplinary knowledge of the various fields related to Architecture. The emphasis is placed on the technical aspects of handling an architectural project within the office or on-site in conjunction with the professional architect. The managerial, technical and administrative requirements of the field include: Cost estimating, field management, systematic approach to building design, preparation of working drawings and detail drawings, specification writing, structural design, job supervision and office practice. Topics related to *Housing Science* may be included as a part of this program.

DEGREE: *Bachelor of Science: Architectural Technology*

LOWER DIVISION PREPARATION: completion of an *Associate* degree program in architectural technology or pre-architecture or academic credit or proven competency in the following areas: algebra and trigonometry (or technical mathematics), construction materials, architectural drawing, technical writing, building codes.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Major Requirements** | | **86** |
| CSN 320 Construction Cost Estimating | 5 | |
| CSN 322 Construction Costs and Scheduling | 5 | |
| CSN 328 Building Systems | 5 | |
| CSN 331 Economic Planning for Construction | 5 | |
| CSN 332 Legal Aspects of Construction | 3 | |
| CSN 345 Graphics Communication | 5 | |
| CSN 350 Mechanics of Materials | 5 | |
| CSN 376 Advanced Architectural Drawing and Design I | 5 | |
| CSN 377 Specification Writing | 5 | |
| CSN 407 Site Development | 5 | |
| CSN 426 Construction Labor Laws | 3 | |
| CSN 429 Quality Control in Construction | 5 | |
| CSN 457 Structural Design | 5 | |
| CSN 480 Advanced Architectural Drawing and Design II | 5 | |
| CSN 482 Professional Office Practice | 5 | |
| MET 360 Mechanical Systems in Construction | 5 | |
| EET 314 Electrical Systems in Construction | 5 | |
| ITE 351 Construction Safety | 5 | |
| *or demonstrated competency | | |
| *Electives:* selected with an advisor to meet degree requirements and program objectives (minimum requirement) | | 4 |
| | | **(Minimum) 90** |

## INTERIOR DESIGN

This program develops the ability to integrate design including basic design elements, space relationships, materials, structural considerations and the interior environment. It includes consideration of industrial, commercial and residential systems.

DEGREE: *Bachelor of Science: Interior Design*

LOWER DIVISION PREPARATION: completion of an *Associate* degree in interior design or related area.

UPPER DIVISION PROGRAM:

| | Quarter Hours |
|---|---|
| *Major Requirements:** | **90** |
| Courses to be selected from the following: | |
| CSN 301 Construction Materials | 5 |
| CSN 320 Construction Cost Estimating | 5 |
| CSN 326 Codes and Specifications | 5 |
| CSN 328 Building Systems | 5 |
| CSN 329 Housing Shelter and the Consumer | 5 |
| CSN 340 Survey of Interior Design | 3 |
| CSN 373 Interior Design | 3 |
| CSN 383 Residential Interiors | 5 |
| CLT 337 Basic Textiles | 3 |
| PSY 410 Environmental Psychology | 5 |
| ARH 305 Survey of the Contemporary Arts | 5 |
| ITE 351 Construction Safety | 3 |
| CSN 332 Legal Aspects of Construction | 3 |
| CSN 375 Architectural Innovations for Construction | 5 |
| CSN 380 Exterior Design | 5 |
| CSN 430 Home Furnishings and Equipment | 5 |
| CSN 376 Advanced Architectural Drawing and Design I | 5 |
| CSN 473 Commercial Interiors | 5 |
| CSN 474 Institution Interiors | 5 |
| CSN 475 Industrial Interiors | 5 |
| *or demonstrated competency | |
| | **(Minimum) 90** |

## ENVIRONMENTAL TECHNOLOGY AND URBAN SYSTEMS DIVISION

This Division is dedicated to improving the quality of life through technology. There is a great need for individuals qualified to plan, design, maintain, manage, and operate in technology without causing injury to man or damaging his environment.

The Environmental Technology and Urban Systems Division has two specific majors and the divisional major: Environmental Engineering Technology and Urban Systems Engineering Technology.

Programs of study in both of these majors provide the student with a strong background which offers not only a comprehensive overview of environmental and urban systems, but also prepares the individual for employment in any one of several careers.

Each major consists of a basic core, a technical specialization, two hours of seminar credit and five hours of independent study. The independent study is equivalent to an under-graduate thesis which must be successfully completed and defended. Through selection of electives, a student may incorporate work from business administration, economics, sociology, natural, physical or social sciences. Courses offered by the Engineering Technology, Industrial Technology and Construction Divisions in the School of Technology provide a means of broadening the student's technical background.

### ENVIRONMENTAL ENGINEERING TECHNOLOGY

This program has been designed to give the student a broad, interdisciplinary background which deals with pollution control, aquatic resources, environmental management, sanitation, environmental protection, solid waste, water treatment and waste water technology. The program of study in this major reflects its fundamental interdisciplinary philosophy and must provide for a technical specialization in one of the following options: Air Quality, Aquatic Resources, Environmental Quality Protection and Water Quality Technology.

DEGREE: *Bachelor of Science: Environmental Engineering Technology*

LOWER DIVISION PREPARATION: academic credit or proven competency in the following areas: mathematics through calculus, physics, chemistry, biology.

*Remark:* A student without these skills may obtain them while completing his or her upper division program.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Core Courses:** | | 45 |
| WQT 320 Applied Hydraulics | 5 | |
| WQT 330 Water Resources | 5 | |
| AQT 351 Air Resources | 5 | |
| EPR 320 Environmental Health | 5 | |
| UPT 316 Urban Planning Concepts | 5 | |
| TEY 355 Technical Communications | 3 | |
| EPR 335 Environmental Instrumentation | 5 | |
| TRT 300 Introduction to Transportation Systems | 5 | |
| ETS 490 Seminar | 2 | |
| ETS 495 Independent Study | 5 | |
| *or demonstrated competency | | |
| *Specialization:* one of the following areas: | | 20 |
| **AIR QUALITY** | | |
| AQT 352 Air Sampling and Analysis | 5 | |
| AQT 353 Air Pollution Control Systems | 5 | |
| AQT 460 Air-Water Interface Ecology | | |
| AQT 462 Air Pollution Administration | 5 | |
| **AQUATIC RESOURCES** | | |
| WQT 365 Potamology | 5 | |
| WQT 366 Limnology | 5 | |
| WQT 367 Aquatic Resources | 5 | |
| WQT 368 Marine Technology | 5 | |
| **ENVIRONMENTAL QUALITY PROTECTION** | | |
| EPR 350 Industrial and Environmental Toxicology | 5 | |
| EPR 375 Environmental Management | 5 | |
| EPR 440 Vector and Pest Control | 5 | |
| ETS 481 Recent Concepts in Environmental Technology Systems | 5 | |
| **WATER QUALITY TECHNOLOGY** | | |
| WQT 332 Water Supply Technology | 5 | |
| WQT 450 Wastewater Processes I | 5 | |
| WQT 451 Wastewater Processes II | 5 | |
| WQT 452 Wastewater Treatment Technology | 5 | |
| *or demonstrated competency | | |
| *Electives:* selected with an advisor to meet degree requirements and program objectives. (minimum required) | | 25 |
| | | **(Minimum) 90** |

## URBAN SYSTEMS ENGINEERING TECHNOLOGY

This program prepares the student for a career in the transportation and urban planning fields and emphasizes the view of the urban area as a complex *system* with various interacting elements. The curriculum enables the individual to contribute as a member of an interdisciplinary team in shaping the future growth of cities and regions. Courses in this program provide the student with an understanding of both the conceptual and analytical techniques employed in planning cities and designing transportation facilities.

Two areas of technical specialization are available in the Urban Systems Engineering Technology major: Urban Planning and Transportation Systems.

DEGREE: *Bachelor of Science: Urban Systems Engineering Technology*

LOWER DIVISION PREPARATION: academic credit or proven competency in the following areas: mathematics through calculus, physics, surveying, engineering drawing.

*Remark:* A student without these skills may obtain them while completing his or her upper division program.

UPPER DIVISION PROGRAM:

| | | *Quarter Hours* |
|---|---|---|
| *Major Requirements:** | | **45** |
| **URBAN PLANNING** | | |
| UPT 316 Urban Planning Concepts | 5 | |
| UPT 411 Urban Land Use Planning | 5 | |
| CSN 407 Site Development | 5 | |
| UPT 410 Planning Implementation | 5 | |
| EPR 375 Environmental Management | 5 | |
| WQT 330 Water Resources | 5 | |
| AQT 351 Air Resources | 5 | |
| TEY 355 Technical Communications | 3 | |
| ETS 490 Seminar | 2 | |
| ETS 495 Independent Study | 5 | |
| **OR** | | |
| **TRANSPORTATION SYSTEMS** | | |
| TRT 300 Introduction to Transportation Systems | 5 | |
| TRT 420 Transportation Planning | 5 | |
| TRT 402 Traffic Engineering Technology | 5 | |
| TRT 412 Traffic Control Devices | 5 | |
| CSN 413 Introduction to Geometric Design of Highways | 5 | |
| WQT 330 Water Resources | 5 | |
| AQT 351 Air Resources | 5 | |
| TEY 355 Technical Communications | 5 | |
| ETS 490 Seminar | 2 | |
| ETS 495 Independent Study | 5 | |
| *or demonstrated competency | | |
| *Restricted Electives:* every student must select *at least four* of the following courses: | | **20** |
| MAS 307 Introduction to Statistics | 5 | |
| MAS 311 Introduction to Computers | 5 | |
| ITE 485 Engineering Economy | 5 | |
| ECO 320 Introduction to Urban Economics | 5 | |
| ECO 321 Regional Economics | 5 | |
| UPT 316 Urban Planning Concepts | 5 | |
| TRT 300 Introduction to Transportation Systems | 5 | |
| HIS 430 Urban History | 5 | |
| SOC 451 Urban Sociology | 5 | |
| POS 323 Urban Politics | 5 | |
| CSN 320 Construction Cost Estimating | 5 | |
| *Other Electives:* selected with an advisor to meet degree requirements and program objectives (minimum required). | | **25** |
| | | **(Minimum) 90** |

## MINORS

The Division of Environmental Technology and Urban Systems offers minors for the student who wishes to obtain certain skills or knowledge in the Environmental and Urban field without necessarily pursuing a major. A Minor Program is open to a

student from any School or the College, as well as any other major in Technology. The following 25 credit sequences constitute minors:

*Air Quality Technology:* AQT 351, AQT 352, AQT 353, AQT 460, AQT 462.
*Aquatic Resources:* WQT 330, WQT 365, WQT 366, WQT 367, WQT 468.
*Environmental Quality Protection:* EPR 320, EPR 350, EPR 375, EPR 440, EPR 481.
*Water Quality Technology:* WQT 320, WQT 332, WQT 450, WQT 451, WQT 452.
*Transportation Systems:* TRT 300, TRT 402, TRT 412, TRT 420, CSN 413.
*Urban Planning:* UPT 316, UPT 411, CSN 407, UPT 410, TRT 300.

## ENGINEERING TECHNOLOGY DIVISION

The student who wishes to enter a technical position which emphasizes the practical application of engineering concepts in areas such as manufacturing, production, design, installation, operation, administration, service and sales will be served by the programs of the Engineering Technology Division. Its programs are designed to give each student technical and organizational know-how which satisfies the needs of industry, business and government in many rewarding technical careers. The graduate of an Engineering Technology bachelor's degree program is a technical problem solver with the skills and training necessary for independent action as a part of the engineering team.

The objectives of the programs include: proficiency in the use of the scientific method; the capability to analyze problems through calculus; the application of processes, equipment, procedures and methods to industrial problems; the knowledge of a field of specialization including the underlying sciences; individual judgment, initiative and resourcefulness; capability of establishing an effective rapport with workmen, scientist, managers and customers; and effective communication skills.

Two majors are offered in the Division of Engineering Technology in addition to the division major: Electrical Engineering Technology and Mechanical Engineering Technology.

### ELECTRICAL ENGINEERING TECHNOLOGY

This program offers specialization in the application of electronic concepts including circuit analysis and design, communications, power, process control, digital systems and related topics.

DEGREE: *Bachelor of Science: Electrical Engineering Technology*

LOWER DIVISION PREPARATION: Completion of a community college associate program in electronics technology, electrical technology, pre-engineering or the equivalent at a four-year institution. An entering student with an *Associate of Science* degree in Technology should have completed algebra and trigonometry, physics, DC and AC circuits, transistor theory and circuits, semi-conductor devices and digital circuits prior to transfer. Pre-Engineering (Associate of Arts) or other transfer students should have completed mathematics through calculus, physics (with electricity) and other sciences at the lower division. The student whose background does not include all of these skills (in *either* Technology *or* pre-Engineering) may be admitted with deficiencies which must be made up while enrolled at Florida International.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* | |
|---|---|---|
| *Core Courses (AA in Pre-Engineering)* | | **22** |
| EET 310 Introduction to Circuit Anal. | 5 | |
| EET 312 Introduction to Electronics | 5 | |
| EET 313 Electronics Lab | 2 | |
| EET 328 Solid State Devices | 5 | |
| Advised Elective | 5 | |
| *Core Courses (AS in Electronic Technology)* | | **20** |
| MAS 301 Calculus I | 5 | |
| MAS 302 Calculus II | 5 | |
| PHY 301 Physics | 5 | |
| PHY 302 Physics | 5 | |
| *Common Core Courses:* | | **70** |

| | |
|---|---|
| COT 300 Logic Design | 5 |
| MAS 311 Introduction to Computers I | 5 |
| EET 316 Advanced Circuit Analysis | 5 |
| EET 317 Introduction to Electrical Power | 5 |
| EET 320 Process Control Technology | 5 |
| EET 340 Modern Communication Technology | 5 |
| EET 428 Electronic Circuit Analysis | 5 |
| EET 430 Integrated Circuits Analysis & Application | 5 |
| ITE 301 Industrial Operations | 5 |
| ITE 485 Engineering Economy | 5 |
| Advised Elective | 5 |
| *Technical Specialization | 15 |
| *Minimum Upper Division Required Hours* | 90 |

* *Technical Specialization:* One of the following areas:

**DIGITAL SYSTEMS**

| | |
|---|---|
| COT 304 Advanced Computer Systems | 5 |
| COT 404 Advanced Logic Design | 5 |
| COT 406 Computer Peripherals & Interfacing | 5 |

**ELECTRICAL POWER**

| | |
|---|---|
| EET 318 Electric Machinery | 5 |
| EET 415 Electrical Power Systems I | 5 |
| EET 425 Electrical Power Systems II | 5 |

**ELECTRONIC COMMUNICATIONS**

| | |
|---|---|
| EET 342 Transmission System for Communication | 5 |
| EET 440 Advanced Communication Systems | 5 |
| EET 466 Passive and Active Filters | 5 |

**PROCESS CONTROL**

| | |
|---|---|
| EET 420 Process Control Instrumentation | 5 |
| EET 422 Advanced Control Systems | 5 |
| EET 468 Digital Process Control Systems | 5 |

**MECHANICAL**

| | |
|---|---|
| WQT 320 Applied Hydraulics | 5 |
| MET 459 Applied Thermodynamics | 5 |
| CSN 350 Mechanics of Materials | 5 |

Including both lower and upper division course work each student must complete a minimum of 34 quarter hours in communications, social science, and humanities, and a minimum of 34 quarter hours in basic science and mathematics (general education requirements).

## MECHANICAL ENGINEERING TECHNOLOGY

This program offers specialization in the application of energy, materials, mechanics, and design to industrial problems.

DEGREE: *Bachelor of Science: Mechanical Engineering Technology*

LOWER DIVISION PREPARATION: academic credit or proven competency in the following areas: mathematics through calculus, physics, engineering drawing, statics.

*Remarks:* a student without these skills may obtain them while completing his or her upper division program.

UPPER DIVISION PROGRAM:

| | Quarter Hours | |
|---|---|---|
| *Major Requirements:* | | 67 |
| CSN 352 Strength of Materials | 3 | |
| EET 300 Survey of Electronics | 5 | |
| ITE 301 Industrial Operations | 5 | |
| ITE 485 Engineering Economy | 5 | |
| MAS 311 Introduction to Computer I | 5 | |
| MET 351 Dynamics | 5 | |
| MET 353 Basic Materials | 5 | |
| MET 362 Mechanical Design I | 5 | |
| MET 459 Applied Thermodynamics | 5 | |
| MET 460 Energy Systems | 5 | |
| MET 463 Air Conditioning Refrigeration Principles | 5 | |
| MET 470 Mechanical Laboratory | 2 | |
| MET 471 Air Conditioning and Refrigeration Laboratory | 2 | |
| WQT 320 Applied Hydraulics | 5 | |
| *Electives:* selected with an advisor to meet degree requirements and program objectives (Minimum required). | | 23 |

Including both lower and upper division course work each student must complete a minimum of 34 quarter hours in communications, social science, and humanities, and a minimum of 34 quarter hours in basic science and mathematics (general education requirements).

## PROFESSIONAL CERTIFICATE PROGRAM

### HEATING, VENTILATING, AND AIR CONDITIONING DESIGN

The purpose of this professional certificate program is to provide a learning experience that will enhance the design capabilities of professionals in the field. Emphasis will include the engineering science background as well as the practical applications of systems design.

The certificate will be awarded to a student who successfully demonstrates competency in:

| | |
|---|---|
| MET 459 Applied Thermodynamics | 5 |
| MET 360 Mechanical Systems in Construction | 5 |
| MET 463 Principles of Air Conditioning & Refrigeration | 5 |
| MET 460 Energy Systems | 5 |
| MET 464 Air Conditioning Design I | 3 |
| MET 470 Mechanical Lab I | 2 |
| MET 465 Air Conditioning Design II | 3 |
| MET 471 Mechanical Lab II | 2 |
| ITE 485 Engineering Economy | 5 |

## INDUSTRIAL TECHNOLOGY DIVISION

The individual who wishes to acquire a technical supervision and management background which emphasizes industrial operations will be served by Industrial Technology. Each Industrial Technology major is enrolled as a divisional major and receives an individualized program of study. By careful planning, and the application of courses available in the School and elsewhere in the University, it is possible to provide for specialization which responds to the needs of a wide variety of industrial settings.

Industrial Technology is defined as a profession in which an understanding of the technical terminology of industry provides a capability of performing technical liaison between management, engineer, scientist, technician, craftsman and customer. The work of the industrial technologist has some characteristics of Engineering Technology and many of the qualities associated with management.

The objectives of the program are: to develop an understanding of the technical aspects of industry; to become familiar with terminology used in industry; to develop supervisory skills involving specialized knowledge, analytical ability and management tools; to develop leadership skills; to effect individual judgment and initiative; to establish effective communications with scientist, managers, engineers, customers and workers.

DEGREE: *Bachelor of Science or Bachelor of Technology: Industrial Technology*

LOWER DIVISION PREPARATION: completion of a community college *Associate* program *or* having attained junior standing in a four-year institution. An *Associate of Science* degree graduate should have earned the degree in the field of his or her intended concentration in the upper division program.

UPPER DIVISION PROGRAM:

| | *Quarter Hours* |
|---|---|
| *Major Requirements and Electives:* | **90** |
| The student must complete a planned individualized program of study, including a coherent specialization which is approved by the School of Technology. The program must be written to satisfy the educational objectives of the Industrial Technology Division and career objectives of the student (see Divisional Major, Page 4). Programs may include specialization in a variety of fields including: Industrial Operations, Industrial Engineering Technology, Communications, Safety, Manufacturing, Fashion Merchandising, and Industrial Sales. | |
| | **90** |

## PROFESSIONAL CERTIFICATE PROGRAM

### INDUSTRIAL SAFETY

The objectives of the Professional Certificate Program in Industrial Safety is to present an integrated learning experience that will provide the student with a minimum level of expertise in the specialized area of Occupational Safety. Particular emphasis will be placed on application, interpretation and administration of the Federal Occupational Safety and Health Act and other regulations in an industrial setting. The program is intended to provide skills which will be directly applied in industry.

The Certificate will be awarded to any student who successfully completed the following 30-credit program, or equivalent:

ITE 350 Industrial Safety (5)
ITE 351 Construction Safety (5)
ITE 450 Health Hazards in Industry (5)
ITE 460 Safety Management (5)
ITE 471 Personnel Relations (5)
ITE 474 Industrial Supervision (5)

## COURSE OFFERINGS

### AIR QUALITY TECHNOLOGY

AQT 351 AIR RESOURCES (5) This course is concerned with providing the student with a basic training in the physical and chemical nature of air pollution, the laws governing the behavior of gases and aerosols, the relation of major sources of contaminants to atmospheric concentrations found to exist in urban and industrial community environments and the fundamental principles of technological control methods.

AQT 352 AIR SAMPLING AND ANALYSIS (5) A comprehensive source sampling program with emphasis on site survey, source testing and calculation. The topic of analytical procedures, design of source sampling trains, and sampling monitors are stressed. Prerequisite: AQT 351.

AQT 353 AIR POLLUTION CONTROL SYSTEMS (5) Introduction to the operation of the various types of air pollution control devices. Theory as well as practice is emphasized. Prerequisite: AQT 352.

AQT 444 NOISE (5) Fundamentals of sound. Measurement and analysis of sound and noise. Survey of measurement systems and techniques. The sources and control of noise. Materials for noise control. Vibration fundamentals.

AQT 460 AIR-WATER INTERFACE ECOLOGY (5) An environmental evaluation of the relationship between the atmosphere and the water surface in natural aquatic eco-systems.

AQT 462 AIR POLLUTION ADMINISTRATION (5) Emphasis is placed on the utilization of information systems, cost benefit analysis and budget control principles used to interpret Federal requirements for state and local governments.

## CLOTHING AND TEXTILE

CLT 325 FASHION AND CULTURE (3) Study of historical, socioeconomic and ethnic influences of fashion design. Includes analysis of current fasion influences.

CLT 335 BASIC CLOTHING CONSTRUCTION (5) Basic course developing skills in wardrobe planning, clothing pattern and fabric selection, machine usage, and construction techniques including their application in construction of apparel for personal use.

CLT 337 BASIC TEXTILES (3) Overview of the physical and chemical properties of textiles and their components as they relate to care, performance and consumer satisfaction.

CLT 425 PATTERN ALTERATIONS (3) Pattern alteration stresses importance of a pattern selector for individual figure types and pattern alteration for special fitting problems. Students will construct a dress, make sample pattern alterations for special fitting problems, and alter a ready-made garment. Prerequisite: CLT 335 or equivalent.

CLT 435 ADVANCED CLOTHING CONSTRUCTION (5) Additional experience in handling special fabrics, pattern and garment fitting, and application of principles and techniques of clothing construction. Prerequisite: CLT 335 or equivalent.

CLT 437 FASHION PRODUCTION AND DISTRIBUTION (3) Study of apparel industries with supervised observation of various aspects of production and distribution.

CLT 438 TAILORING (5) Application of custom tailoring techniques through the construction of a suit or coat with emphasis on fabric selection and pattern alteration. Prerequisite: CLT 435 or equivalent.

CLT 440 FASHION MERCHANDISING FIELD EXPERIENCE (5-10) Supervised "on-the-job" training and periodic seminars. Consent of faculty instructor required.

CLT 444 CREATIVE TEXTILES (5) Laboratory portion of Basic Textiles where students will explore techniques for designing and constructing textile fabrics. Experiences will include macrame, batik, tie-dying, weaving, knitting and crocheting. Course is designed for Home Economics and Art Education majors.

CLT 495 INDEPENDENT STUDY (1-5) Specialized intensive study in an area of special interest to the student. Consent of faculty instructor required.

CLT 497 SPECIAL TOPICS (1-5) For a group of students who wish an intensive study of a topic not offered in the University. Consent of faculty supervisor and division director is required.

CLT 534 PATTERN DESIGN (5) Principles of pattern fitting will be explored through the construction of a basic sloper. Samples of various pattern design techniques will be constructed. Students will design and construct at least one garment. Prerequisite: CLT 336 or CLT 435 or equivalent.

CLT 535 NEW TRENDS IN CLOTHING CONSTRUCTION (3) A study of the latest techniques for sewing today's fabrics including some factory methods. Prerequisite: CLT 435 or equivalent.

CLT 536 TODAY'S TEXTILES (3) A study of today's textiles fabrics, and the chemical and physical properties peculiar to all fibers.

CLT 537 TEXTILES AND CLOTHING SEMINAR (1-5) By permission of instructor only.

CLT 538 TAILORING MENSWEAR (5) Application of tailoring techniques commercially used in the production of menswear through the construction of a knit jacket and trousers. Prerequisite: CLT 435 or equivalent.

## COMMUNICATIONS

COM 320 FEATURE WRITING (5) The fact story: researched and written in depth. Planning, constructing, writing and marketing non-fiction articles for general and special interest magazines and newspaper feature pages. Includes the query letter; preparing photos and illustrations to accompany the article.

COM 321 INTERVIEWING TECHNIQUES (5) The interview as a source of information and as a story. Preparing and conducting interviews, including planning of questions, note-taking and transcription, writing and editing. The Symposium interview; the press conference; the personality sketch.

COM 350 EDITING AND MAKE-UP (5) Practical skills involved in putting out a newspeper; editing copy for clarity, facts and brevity; headline writing; page make-up; copy reading and proofreading marks. Attention will be given to editing for T.V. and radio news and features.

COM 355 ADVANCED EDITING AND GRAPHICS USE (5) Study of makeup, layout and design techniques as they pertain to production of magazines, brochures, newsletters and newspapers. Provides an opportunity for individualized projects related to print communications. Prerequisites: COM 350 and COM 380 or equivalents.

COM 380 NEWS REPORTING (5) To teach the skills necessary to recognize and produce a good news or features story; experience with actual interviews, discussions with successful writers and journalists, and critique of student work. News judgement and identification of proper sources will be introduced.

COM 385 WRITING FOR ELECTRONIC MEDIA (5) Practical assignments in the writing of news for radio and television. Will include gathering, processing and final preparation of scripts. Emphasis will be on skills development. A brief study of libel, invasion of privacy, fairness doctrine and equal time will be included. Prerequisites: COM 380, COM 321 or equivalents.

COM 400 ROLE OF MASS MEDIA IN SOCIETY (5) To investigate the role played in the U.S. by the mass communications media as a cultural, social, informational, economic, political and educational force. The interrelationship of all media and their potential impact on the collective population will be studied.

COM 410 MASS COMMUNICATIONS LAW (5) Study of laws that regulate U.S. mass media, their interpretations through recent court decisions and how communicators work within the statutes of their nation and state.

COM 470 COMMUNICATIONS TECHNOLOGY (5) This course will provide the study of modern communication equipment usage and impact, with special emphasis upon electronic and visual transmission, reception and projection capabilities and methods. Future development and instrumentation in technical communication systems will also be stressed.

COM 480 REPORTING OF PUBLIC AFFAIRS (5) To teach the student how to cover government activities for newspapers, television, and radio. Aspects of the budget office, county manager's office, and the commissioner's office, courts and planning and zoning will be outlined. Guest speakers from government offices will appear.

COM 490 COMMUNICATIONS INTERNSHIP (1-10) On the job learning activity at selected and approved commercial media. Will include newspaper, magazine, radio, television and agency placement. Prerequisite: Consent of advisor.

## COMPUTER ENGINEERING TECHNOLOGY

COT 300 LOGIC DESIGN (5) Karnaugh maps and Quine McCluskey reduction techniques, study of analytical and empirical tools necessary to design with digital IC's; combinational logic, and sequential circuits are considered (includes lab). Prerequisite: Boolean Algebra.

COT 302 COMPUTER HARDWARE FUNDAMENTALS (5) Analysis of computer elements and systems composed of flip-flops registers, counters, adders, etc.; study of a basic arithmetic unit, core memory system, control unit, and organization of these units into a system (includes lab).

COT 304 ADVANCED COMPUTER SYSTEMS (5) Study of hardware computer systems and components in a laboratory environment, arithmetic and memory system, complete minicomputer, digital communications system, digital modem input-output interface (includes lab). Prerequisite: COT 300.

COT 404 ADVANCED LOGIC DESIGN (5) Analysis, design and optimization of combinational systems, and interactive networks; study of digital systems such as multiplexers, D/A and A/D converters, digital multimeters, modems, arithmetic circuits, etc. Prerequisite: COT 300.

COT 406 COMPUTER PERIPHERALS AND INTERFACING (5) Introduction to digital I/O equipment to include disk and drum storage, reel and cassette magnetic tape units, AD and DA converters, paper tape devices, teletypewriters, card readers (includes lab). Prerequisites: MAS 311 and COT 304 or equivalent.

## CONSTRUCTION

CSN 300 SURVEYING (5) Computations and field procedures associated with measurement of distances, directions and angles, using the tape, level and transit. Prerequisite: Trigonometry.

CSN 301 CONSTRUCTION MATERIALS (5) A study of the origin, production and uses of construction materials, such as concrete, steel, aluminum, plastics, wood, brick and stone. Prerequisite: Physics.

CSN 304 MATERIALS AND METHODS OF CONSTRUCTION (3) A study of the types of construction and materials used in buildings. How materials are properly installed and inspected, including the use of special equipment in accordance to specifications, codes, standards, and agencies' recommendations. Prerequisites: CSN 306 and CSN 326 or equivalent.

CSN 305 ADVANCED SURVEYING (5) Computations and field procedures for earthwork and horizontal and vertical curves. Application in establishing horizontal and vertical control in boundary determinations, construction sites, and mapping. Topographical mapping and principles of photogrammetry. Prerequisite: CSN 300 or equivalent.

CSN 306 CONSTRUCTION METHODS AND EQUIPMENT (3) Methods, procedures, and equipment used in residential, commercial and heavy construction. Equipping the construction plant. Production value analysis. Work effectiveness studies. Prerequisite: Algebra.

CSN 307 LAND SURVEYING (5) The theory and practice of land surveying including computations, procedures, platting, records, land descriptions, legal aspects, controls requirements, urban surveys, coastal boundary surveys, astronomical observations, U.S. Government and State requirements, Cadastral surveying and professional registration. Prerequisite: CSN 300.

CSN 320 CONSTRUCTION COST ESTIMATING (5) Principles and theories of estimating, classification of work, and quantity survey techniques providing knowledge and skill as applied to various types of construction projects. Prerequisites: CSN 301 or CSN 304, or equivalent.

CSN 322 CONSTRUCTION COSTS AND SCHEDULING (5) The application of the Critical Path Method and Program Evaluation Review Technique to construction planning, scheduled vs. actual job expenditures. Cost forecasting. Development of unit prices from field data. Prerequisite: CSN 320 or equivalent.

CSN 326 CODES AND SPECIFICATIONS (5) A study of codes required by local, county, and state levels. The writing and reading of specifications. Bidding procedures. The relationships between the contractor, engineers-architects, owners, subcontractors, and material suppliers. Prerequisites: CSN 301 or CSN 304 or equivalent.

CSN 328 BUILDING SYSTEMS (3) An introduction to the problems relating to the theory and the development of building construction. The investigation of problems relating to the distribution of functions in various types of construction, (commercial, industrial or public buildings) the selection and placement of various facilities for optimum utilization of the building. Prerequisite: CSN 301 or CSN 304.

CSN 329 HOUSING: SHELTER AND THE CONSUMER (5) History and development of shelter and its effect on the family, community, towns, cities, etc. House planning and furnishings from the economic, social, scientific and aesthetic point of view.

CSN 330 MANAGEMENT OF CONSTRUCTION PROJECTS (3) Organization and management theory for construction. Elements of leadership and human supervision. Contractor organization, office operations, project management, labor relations, and safety requirements. Prerequisites: CSN 322 and CSN 326 or equivalent.

CSN 331 ECONOMIC PLANNING FOR CONSTRUCTION (5) Nature of construction costs, funding sources and arrangements, capital requirements, bonding, insurance, risk and contingency evaluation, general office operations, and bidding procedures. Prerequisites: CSN 330 and ITE 300 or equivalent.

CSN 332 LEGAL ASPECTS OF CONSTRUCTION (3) Legal and business aspects of engineering contracts and specifications in the construction industry. Analysis, study of precedents and application of contract clauses, including changes, changed conditions, termination, disputes, payments, risk and insurance, inspection, liquidated damages, and technical requirements. Prerequisite: CSN 326 or equivalent.

CSN 340 SURVEY OF ARCHITECTURAL INTERIOR DESIGN (3) Application of the elements, principles and introduction to the basic facets of architectural interiors and its relationship to interior environment in general. Prerequisite: Non-majors and transfer students without interior design background.

CSN 345 GRAPHICS COMMUNICATION (5) Form-space studies using perspective illustration, sectioning and detailing through freehand and instrument drawing and models. Graphic color experiments developing color use as a tool through various media.

CSN 350 MECHANICS OF MATERIALS (5) Applications of the principles of mechanics to engineering problems of equilibrium, strength, and stiffness. Topics include equilibrium of forces, stress, strain, torsion, beams, and columns. Prerequisite: Consent of instructor.

CSN 351 STATICS (3) Study of forces acting on bodies, including coplanar and non-coplanar forces, concurrent and non-current forces, friction forces, and hydrostatic forces. Prerequisite: Consent of instructor.

CSN 352 STRENGTH OF MATERIALS (3) Axial, torsional, shear, bending, and combined stress and strain analysis; mechanical properties and applications for static, dynamic, fatigue, and creep conditions. Prerequisite: CSN 351 or equivalent.

CSN 353 DETERMINATE STRUCTURAL ANALYSIS (3) Analysis of statically determinate structural systems by analytical methods. Reactions; shear, axial, and moment diagrams; truss analysis, influence lines; moving loads. Prerequisite: CSN 350 or CSN 352 or equivalent.

CSN 354 SOIL MECHANICS AND FOUNDATIONS (5) Identification and properties of soils. Behavior of soils relating to design and construction of foundations for structures and pavements. Prerequisite: CSN 350 or CSN 352.

CSN 354L SOIL MECHANICS LABORATORY (2) (S) Laboratory experiments in identification, properties and behavior of soils. Prerequisite or corequisite: CSN 354.

CSN 357 INDETERMINATE STRUCTURAL ANALYSIS (3) Analysis of statically indeterminate structural systems by analytical methods. Development and use of theorems of moment area, conjugate beam, elastic weights, virtual work, slope deflection, and moment distribution. Moving loads and influence lines. Prerequisite: CSN 353.

CSN 365 COMPUTER APPLICATIONS IN STRUCTURAL ANALYSIS AND DESIGN (5) Discussion and application of various available computer programs and equipment for structural analysis and design. Application of the stiffness method and the flexural method of structural analysis. Prerequisites: CSN 451, CSN 455 and MAS 311.

CSN 370 ARCHITECTURAL CONCEPTS OF CONSTRUCTION (5) An examination of architectural design ideas and construction involving structural systems, materials, design standards and codes in a manner they can be utilized effectively. Original ideas encouraged.

CSN 372 INTERDISCIPLINARY ASPECTS OF HOUSINGS (3) Recognition and definition of all factors which affect the planning, financing and construction of housing projects. The operations and responsibilities of a multidisciplinary team dealing with the decision process. Prerequisite: Consent of instructor.

CSN 373 INTERIOR DESIGN (3) Integrated study of design to use in furnishing interiors using theoretical and technical aspects of the field. Emphasis in blueprint reading, terms, color theory; lighting will be discussed and evaluated. Prerequisite: CSN 340 or equivalent.

CSN 375 ARCHITECTURAL INNOVATIONS FOR CONSTRUCTION (5) Specialized study in an area of interest to the student where architectural design is used with new methods of construction due to advancing technological developments. Drawings and field surveys. Prerequisite: Consent of instructor.

CSN 376 ADVANCED ARCHITECTURAL DRAWING AND DESIGN I (5) Methodology of planning and preparation of Architectural Drawings with special emphasis on Working Drawings and Detail Drawings. Prerequisite: CSN 345.

CSN 377 SPECIFICATION WRITING (5) Study of information acquisition on legal and technical aspects of construction, preparation of outline specifications, building description and purchasing specifications. Problems of format, reviewing, and updating. Prerequisite: CSN 326.

CSN 380 EXTERIOR DESIGN (3) Exploration and analysis of the relationship of exterior and interior environment. Emphasis on three dimensional design projects. Using basic model making and presentations. Prerequisite: CSN 373 or its equivalent.

CSN 383 RESIDENTIAL INTERIORS (5) Consideration and application of design criteria including floor, wall and ceiling materials and treatments, furniture selection and arrangement, illumination, ventilation and selected architectural details for residential spaces. Prerequisites: CSN 373 and CSN 430 or its equivalent.

CSN 385 SURVEY OF ARCHITECTURAL HISTORY (5) Comprehensive study of architectural forms and their predominant characteristics through history. Prerequisite: Consent of instructor.

CSN 400 ROAD CONSTRUCTION (5) A study of highway planning, pre-construction investigations such as surveys, soil test data and drainage, types of construction procedures, materials and equipment. Familiarization with standard methods required for various governmental agencies. Prerequisites: CSN 301, CSN 305 and CSN 354 or equivalent.

CSN 402 HEAVY CONSTRUCTION (5) A study of construction procedures and equipment utilized in heavy engineering service systems. Planning, surveys, foundation investigation, materials for typical projects such as highrise buildings, tunnels, bridges, dams, rapid transit systems and other heavy public works. Prerequisites: CSN 300 and CSN 306.

CSN 405 FOUNDATIONS DESIGN AND CONSTRUCTION (5) Use of soil mechanics and subsurface construction theory and practice for design and construction of foundations for buildings and other engineering facilities. Topics include shallow and deep foundations, excavation, bracing and retaining structures. Prerequisite: CSN 354 or equivalent.

CSN 407 SITE DEVELOPMENT (5) Fundamentals of the art of site planning; physical, economic, social and governmental constraints affecting development; zoning; land use controls; subdivision layout; modular design; site characteristics (soil, geology, topography), drainage, access. Design and construction techniques. Prerequisite: Consent of instructor.

CSN 413 INTRODUCTION TO GEOMETRIC DESIGN OF HIGHWAYS (5) Route surveys by ground and aerial methods-reconnaissance, preliminary and location surveys; geometric properties of highway curves; spiral theory; design controls for both vertical and horizontal alignments. CSN 305 and MAS 311 or equivalent.

CSN 426 CONSTRUCTION LABOR LAWS (3) A study of the common law and statutory law affecting union-management relations in construction, with emphasis on current labor legislation including such areas as the National Labor Relations Act and amendments, the Railway Labor Act, wage and hour legislation, workmen's compensation, unemployment compensation and social security laws. Occupational safety and health hazards associated with construction labor. Prerequisite: CSN 326.

CSN 428 SYSTEMS APPROACH FOR HOUSING PLANNING (3) Discussions of basic concepts of systems analysis and systems approach to the field of housing planning. The advantages of systems approach. Case studies. Prerequisite: CSN 372 or equivalent.

CSN 429 QUALITY CONTROL IN CONSTRUCTION (5) Quality control as governed by the job inspector, contractor superintendent, architect-engineer, building commissioner, and governmental agencies and requirements. Prerequisite: CSN 326 or equivalent.

CSN 430 HOME FURNISHINGS AND EQUIPMENT (5) Principles involved in the construction, selection, operation and care of furnishings and equipment and their relationship to their environmental use. Prerequisite: CSN 340 or its equivalent.

CSN 450 STRUCTURAL SYSTEMS (5) A general study of the methods of structural systems; such as beams, columns, rigid frames, arches, trusses, floors, enclosure systems, and various foundation configurations. The limitations of using various structural materials for the systems will be discussed. Prerequisite: CSN 350 or CSN 352.

CSN 451 STEEL DESIGN (5) The analysis and design of structural elements and connections for buildings, bridges and specialized structures utilizing structural steel. Both elastic and plastic designs are considered. Prerequisite or corequisite: CSN 357.

CSN 452 TIMBER DESIGN (5) The analysis and design of modern wood structures. Effect of plant origin and physical structure of wood on its mechanical strength; fasteners and their significance in design. Prerequisite: CSN 350 or CSN 352 or equivalent.

CSN 455 REINFORCED CONCRETE DESIGN (5) The analysis and design of reinforced concrete beams, columns, slabs, retaining walls, and footings. Both the working and ultimate strength design methods will be discussed with primary emphasis corresponding to recent ACI Building Code. Prerequisite: CSN 357.

CSN 457 STRUCTURAL DESIGN (5) Elements of structural design in steel, reinforced concrete, and timber with design specifications per AISC, ACI and NDS. Introduction to prestressed concrete design. Loadings and structural elements commonly encountered in construction will be used for analysis and design. Prerequisite: CSN 350 or CSN 352 or equivalent.

CSN 470 HOUSING AND ENVIRONMENT (3) The impact of housing planning and construction on a community and environment. The necessity of total planning to protect the environment. Public participation in housing planning. Economics vs. ecology. Prerequisite: CSN 372.

CSN 471 BASIC UTILITIES AND HOUSING (3) The study of the importance of basic utilities such as roads, sewer and water supply systems in the housing planning and construction. A relative cost analysis; health problems; and sociological effects of lack of basic utilities. Innovative concepts to incorporate basic utilities to all housing projects in developing countries. Prerequisite: Consent of instructor.

CSN 473 COMMERCIAL AND OFFICE INTERIORS (5) Analysis, synthesis, articulation and design execution of commercial spaces, integrating human factors, environmental-technological systems, activity structure and symbiotic relationships as space design determinates. Consideration of significant aspects of culture, design components, and merchandising procedures. Prerequisites: CSN 373 and CSN 430 or equivalent.

CSN 474 INSTITUTION AND INDUSTRIAL INTERIORS (5) Analysis and synthesis of institutional functions, administrative controls, resources, constraints and policies in planning and design of institutional facilities. Consideration of esthetic, social, economic, behavioral and environmental parameters. Selection and design of selected furnishings and components. Prerequisites: CSN 373 and CSN 430 or equivalent.

CSN 475 EXHIBIT AND DISPLAY DESIGN (5) Articulation and analysis of exhibit and display planning and design, integrating purpose, perceptual and effectiveness into the design process, emphasis on the coordination of materials, graphic design, color and illumination. Prerequisites: CSN 373, CSN 345 or equivalent.

CSN 479 ARCHITECTURAL DESIGN (5) Integrated study of design, basic design elements and principles of design in awareness of effect on architectural design. Presentation drawings, plans and quantity surveys. Prerequisite: CSN 345 or equivalent.

CSN 480 ADVANCED ARCHITECTURAL DRAWING AND DESIGN II (5) New techniques in the preparation of working drawings, detail drawings, inclusion of change orders. Preparation of finish schedules with correlation to specifications writing. Prerequisite: CSN 376.

CSN 482 PROFESSIONAL OFFICE PRACTICE (5) Assignments on office administration, negotiation of contracts, fee structure, client and public relations. Business organization and procedure scheduling and task allocation within an architectural office. Prerequisite: CSN 332 or equivalent.

CSN 495 INDEPENDENT STUDY (1-5) Specialized intensive study in an area of special interest to the student. Consent of instructor is required.

CSN 497 SPECIAL TOPICS (1-5) For a group of students who wish an intensive study of a topic not offered in the University. Consent of faculty supervisor is required.

CSN 512 PAVEMENT DESIGN (5) Analysis and design of sub-base, base and pavement of a roadway. Discussions of flexible pavement and rigid pavement as structural units. Boussinesq's approach, Westergaard's theory. Beams on Elastic Foundations. Prerequisite: CSN 354 and CSN 455.

CSN 513 ADVANCED GEOMETRIC DESIGN OF HIGHWAYS (5) Parameters governing the geometric design of highways; curve super-elevation; widening on highway curves; elements of intersection design; design of interchanges; use of AASHO design guidelines; a design project required. Prerequisite: CSN 413.

CSN 556 PRESTRESSED CONCRETE DESIGN (5) The behavior of steel and concrete under sustained load. Analysis and design of pre-tensioned and post-tensioned reinforced concrete members and using these members into the integral structure. Prerequisite: CSN 455 or equivalent.

CSN 557 ADVANCED STRUCTURAL DESIGN (5) The design of structural systems to formalize the student's knowledge of the behavior of individual components into a final integrated structure. Continuous span and simple span highway bridges, culverts, retaining walls, rigid frames, multi-storied buildings and similar type problems of interest to the student. Prerequisites: CSN 451 and CSN 455.

CSN 564 COMPUTER APPLICATIONS IN CONSTRUCTION (5) The discussion of various available computer programs related to different construction operations. Applications of some of these programs. Prerequisite: Consent of instructor.

CSN 570 INNOVATIONS IN BUILDING TECHNOLOGY (3) Possible changes made or to be made with advancing technological developments affecting the building industry. Prerequisite: Consent of instructor.

CSN 572 HOUSING FOR DEVELOPING COUNTRIES (3) Problems faced by the developing countries in housing their population. Political, economic, social and technical considerations in decision process. Prerequisite: CSN 372 or equivalent.

CSN 595 INDEPENDENT STUDIES (1-5) Specialized intensive study in an area of special interest to the student. Prerequisite: Consent of instructor, advisor and director.

CSN 597 SPECIAL TOPICS (1-5) For a group of students who wish an intensive study of a topic not offered in the University. Prerequisite: Consent of faculty supervisor is required.

## COOPERATIVE EDUCATION

COE 340 COOPERATIVE EDUCATION TECHNOLOGY (5) Supervised full-time work quarter for technology cooperative education students. Limited to students admitted to the co-op program with consent of advisor. Evaluation and reports required.

COE 440 COOPERATIVE EDUCATION TECHNOLOGY (5) Supervised full-time work quarter for technology cooperative education students. Limited to students admitted to the co-op program with consent of advisor. Evaluation and reports required.

## ELECTRICAL ENGINEERING TECHNOLOGY

EET 300 SURVEY OF ELECTRONICS (5) The basic principles of AC and DC circuits, solid state devices, and fundamental electronic circuits. This course is intended for students outside of the Electrical Engineering Technology major with no prior knowledge of electronics (includes lab).

EET 310 INTRODUCTION TO CIRCUIT ANALYSIS (5) Introduction to AC and DC circuit analysis. Use of complex algebra and phasors. Loop and node analysis. Resonance circuits. Introduction to three phase circuits. Transient analysis of first and second order circuits using calculus. Prerequisites: MAS 302 and Physics with electricity or equivalent.

EET 312 INTRODUCTION TO ELECTRONICS (5) Introduction to electronic circuit elements and analysis using calculus. Diode and transistor principles and circuits. Survey of pulse and digital circuits and various semiconductor devices. Prerequisite: EET 310 or equivalent Corequisite: EET 313.

EET 313 ELECTRICAL AND ELECTRONIC LABORATORY (2) Introduction to laboratory equipment and techniques for pre-engineering students. Includes laboratory experiments on AC and DC circuits, electronic equipment and circuits, instrumentation such as meters, oscilloscopes, generators, etc. Corequisite: EET 312.

EET 314 ELECTRICAL SYSTEMS IN CONSTRUCTION (5) A survey of electrical and lighting requirements for residential and commercial buildings. Emphasis on estimating circuits, power requirements, layout constraints, etc.

EET 316 ADVANCED CIRCUIT ANALYSIS (5) This course provides the students with a basic knowledge of Laplace transforms for practical applications in networks and systems. Complex frequency poles and zeros concepts and applications, transformed networks, Fourier transform and signal spectra are also covered. Prerequisite: EET 310 or equivalent. Corequisite: MAS 302 and EET 312.

EET 317 INTRODUCTION TO ELECTRICAL POWER (5) Structure of electrical power systems. Major components and modern energy systems. Magnetism and magnetic circuits. Mutual induction and self induction. Three-phase circuit analysis and per unit calculations. Transformers and transformer connections. Energy conversion. Power system loads and statistical load-forecasting. Calculation of cost of electrical energy. Prerequisite: EET 316.

EET 318 ELECTRIC MACHINERY (5) Analysis of rotating electric machinery with emphasis on industrial applications (includes lab).

EET 320 PRACTICAL LINEAR SYSTEM ANALYSIS (5) Basic concepts and applications of linear systems. Dynamic performance, simulation, feedback and stability are among the topics covered by the course. Emphasis is made in the correlation between mathematical methods and physical concepts.

EET 328 SOLID STATE DEVICES (5) Study of virtually all modern semiconductor devices with applications. MOSFET, photodetectors, thyristors, unijunction transistors, special diodes, etc. (includes lab). Prerequisite: EET 300 or equivalent.

EET 329 PULSE AND DIGITAL CIRCUITS (5) An introduction to non-linear circuits including logic gates, multivibrators, waveshaping, trigger circuits, sweep generators, clipper and clamper circuits, etc. (includes lab). Prerequisite: EET 312 or equivalent.

EET 340 MODERN COMMUNICATION TECHNOLOGY (5) Definitions, basic concepts and application of analog and digital modulation techniques. Modulators for generating various signals and demodulators for information recovery are studied. Quantization. Decoding. Effect of noise in communication systems. Prerequisite: EET 316 or equivalent.

EET 342 TRANSMISSION SYSTEM FOR COMMUNICATION (5) Terminology, definitions and methods by which transmission objectives for message channels are established. Noise and its measurement. Crosstalk. Analog and digital transmission lines. Wideband data transmission (includes lab). Prerequisite: EET 340.

EET 415 ELECTRICAL POWER SYSTEMS I. Power network concepts, AC & DC transmission power transmissions, power transmission lines, power network representations, basic network solutions, symmetrical fault studies, symmetrical components. Prerequisite: EET 318.

EET 420 PROCESS CONTROL INSTRUMENTATION (5) Study of electronic instruments and measurement systems and their relation to process control. Sensors. Recording devices, transmission channels, and noise affecting the data collection system are studied. Basic theory and operation of process control components, such as tachometers, synchros, error detectors, servomotors, etc. (Includes lab). Prerequisite: EET 320.

EET 422 ADVANCED CONTROL SYSTEMS (5) Applications of root-locus techniques and Bode diagrams to the analysis and design of practical industrial process control systems. Use of analog and digital computers in process control. AC and hybrid systems. Prerequisites: EET 320 and 416.

EET 425 ELECTRICAL POWER SYSTEMS II (5) Unsymmetrical faults and loads, the bus impedance matrix solutions for fault studies. Control of voltage, watts, vars. Load flow, economic dispatch and system stability. Prerequisite: EET 415.

EET 428 ELECTRONIC CIRCUIT ANALYSIS (5) Analysis and design of electronic circuits using bipolar transistors, FET's and MOSFET's. Application of frequency response techniques to the analysis and design of feedback amplifiers, tuned amplifiers, oscillators, modulators and demodulators, power amplifiers etc. Introduction to integrated circuits. Prerequisites: EET 316 and EET 328 or equivalent.

EET 430 INTEGRATED CIRCUITS ANALYSIS AND APPLICATION (5) Application of state-of-the-art integrated circuits. Comparison of different IC's from the SSI, MSI, and LSI areas. Design and characteristics of linear and digital integrated circuits. Prerequisite: EET 428.

EET 440 ADVANCED COMMUNICATION SYSTEMS (5) Study of advanced communication systems and techniques. Emphasis is placed on the study of digital and FM systems. Phase-lock techniques, noise analysis, threshold data, and transmission are among the subjects extensively covered (includes lab). Prerequisite: EET 340.

EET 466 PASSIVE AND ACTIVE FILTERS (5) Practical application of passive and active filters to communication and process control systems. Laboratory applications. Prerequisite: EET 416.

EET 468 DIGITAL PROCESS CONTROL SYSTEMS (5) Study of digital process control systems. Time frequency response to discrete systems. Digital controllers. Application to industrial processes. Laboratory work with digital components and systems (includes lab). Prerequisite: EET 320 or equivalent.

## ENGINEERING TECHNOLOGY

ENT 495 INDEPENDENT STUDY (1-5) Specialized intensive study in an area of special interest to the student. Consent of faculty instructor required.

ENT 497 SPECIAL TOPICS (1-5) For a group of students who wish an intensive study of a topic not offered in the University. Consent of faculty supervisor and division director is required.

## ENVIRONMENTAL QUALITY PROTECTION

EPR 320 ENVIRONMENTAL HEALTH (5) The effects of environmental pollutants on man's health and the quality of life.

EPR 335 ENVIRONMENTAL INSTRUMENTATION (5) Laboratory techniques, skills and safety. Basic laboratory instrumentation. Environmental sampling devices. Sample preservation and storage.

EPR 350 INDUSTRIAL AND ENVIRONMENTAL TOXICOLOGY (5) Basic aspects of toxicology. Effects, assessment and control of physical and chemical toxic agents in the environment. Industrial hygiene and safety practices. Occupational diseases. The quality of life in the urban environment. The disposal of toxic wastes and the impact on the environment. The concept of food chains and biological magnification. Toxic residuals in the environment.

EPR 375 ENVIRONMENTAL MANAGEMENT (5) The wise use of land and water for parks and recreational areas. The environmental design and need for green spaces. Ecologically safe methods for the control of vegetation and insects are emphasized.

EPR 430 SOLID WASTE MANAGEMENT (5) A study of the technological aspects of collection, transport and disposal of municipal, industrial and agricultural solid wastes. Methods of disposal; biochemical, ecological and energetic considerations. Recovery and recycle of wastes.

EPR 440 VECTOR AND PEST CONTROL (5) Occurrence and control of communicable diseases. The role of vectors and their control. Sanitation of food production, processing, and distribution. Population and resources: the challenge to produce more food. The Green Revolution. Pest control: chemical and biological agents. Diversity and stability of eco-systems. Pesticides and risks in their use.

EPR 445 ENVIRONMENTAL INSTRUMENTATION (5) Theory of and laboratory practice in the optical, electronic, electric, and mechanical methods used for measuring and recording environmental variables. Introduction to telemetry and computer data processing.

EPR 516 ENVIRONMENTAL PLANNING (5) Ecological principles necessary to preserve a quality environment are presented by means of planning policies, processes and environmental indicators. Emphasis will be placed on the impact of growth on environmental quality.

EPR 582 ENVIRONMENTAL MODELING (5) Evaluation of regional resources. Environmental stresses and considerations in regional systems. System analysis in environmental management and its relation to decision-making. Modeling of ecological systems.

## ENVIRONMENTAL TECHNOLOGY

ETS 370 INTRODUCTION TO ENVIRONMENTAL TECHNOLOGY SYSTEMS (5) This course is designed for non-majors as an integrated approach to the role of technological man in the biosphere. Emphasis is placed on methods for the environment quality improvement of land, air, water, transportation, and planning systems.

ETS 481 RECENT CONCEPTS IN ENVIRONMENTAL TECHNOLOGY SYSTEMS (5) An in-depth analysis of a specific current topic or problem relating to environmental technology or urban systems.

ETS 490 SEMINAR (2) The course consists of oral presentations made by students, guests and faculty members on current topics and research activities in environmental technology and urban systems. Prerequisite: Senior standing.

ETS 495 INDEPENDENT STUDY (1-5) Individual research studies available to academically qualified students. Consent of instructor required.

ETS 497 SPECIAL TOPICS (1-5) Specific aspects of environmental technology or urban systems not available through formal course study. Open to academically qualified students. Consent of instructor required.

ETS 595 INDEPENDENT STUDY (1-5) Individual research studies available to academically qualified students of graduate status.

ETS 597 SPECIAL TOPICS (1-5) Specific aspects of environmental technology and urban systems not available through formal course study. Open to academically qualified graduates only.

## INDUSTRIAL ARTS TECHNOLOGY

IAT 305 CONSTRUCTION TECHNOLOGY (5) Laboratory experiences of basic production, management and personnel practices as they relate to construction systems and projects.

IAT 306 MANUFACTURING TECHNOLOGY (5) Laboratory experiences of basic manufacturing, management, personnel, and production practices as they relate to products and processes. Safety procedures.

IAT 307 REPROGRAPHICS (5) Laboratory experiences in the theory and practice of communicating through graphics; includes experiences in copywriting, editing, image generation, image assembly, photo conversion, image carrier preparation, transfer, and finishing.

IAT 405 CONSTRUCTION PROCESSES (5) Laboratory experiences in the principles and practices of the construction trades, includes concrete and plaster trades, electrical, plumbing, carpentry, iron work, sheetmetal, roof and finishing trades in setting foundations, erecting structures, installing mechanical and electrical systems, applying surface material and finishing.

IAT 406 INDUSTRIAL RESEARCH AND DEVELOPMENT (5) Laboratory experiences in formulating, researching, designing, and developing prototypes of constructed and manufactured products and processes. Prerequisite: IAT 305 or IAT 306.

IAT 407 PLANOGRAPHIC PROCESSES (5) Laboratory experiences in the theory and practice of offset lithography. Emphasis will be directed toward skill development in design and copy preparation, process photography, stripping, platemaking, and duplicator operation.

IAT 408 PHOTOGRAPHICS (5) Laboratory experiences in the theory and practice of photography as used in visual communications. Develops proficiencies in camera work, developing, and printing.

IAT 409 MATERIALS OF INDUSTRY (5) Laboratory experiences in the theory and practice of characteristics of materials of industry. Includes test and measurement of stress, strain, torsion, tensile strength, fatigue, and hardness of metals, wood, fabrics, ceramics and synthetics.

IAT 415 DRAFTING I (5) Laboratory experiences in the principles and practice of idea development and expression through free hand sketching and conventional instrument drafting. A beginning course for students with no prior drafting experience.

IAT 416 DRAFTING II (5) Laboratory experiences in the principles and practices of product design and communication. Includes conventions, projections, and dimensions and problems of making drawings for product production. Prerequisite: IAT 415 or equivalent.

IAT 417 MECHANICAL POWER SYSTEMS I (5) Laboratory experiences in the theory of operation and related maintenance of single and multiple cylinder reciprocating engines. Includes introductory experience with mechanical, fluid, and pneumatic power systems.

IAT 418 ELECTRICAL/ELECTRONIC POWER SYSTEMS (5) Introductory course designed primarily for the novice in electricity/electronics. Laboratory experience consists of planned activities centered about electrical/electronic instrumentation and power systems.

IAT 419 MATERIALS PROCESSING (5) Laboratory experiences in the principles and practices of separating, forming, and combining techniques to produce components, subassemblies, assemblies and finished products. Includes a variety of materials, equipment and fabrication techniques.

IAT 420 ARCHITECTURAL DRAFTING (5) Laboratory experiences in designing structures, developing working drawings and specifications for constructed projects. Includes development of site, foundation, floor, elevations, plumbing plans, and specifications.

IAT 422 MECHANICAL POWER SYSTEMS II (5) Advanced laboratory experiences with reciprocating engines. Introductory study of turbine, diesel, and rotary engines. Introductory study of aircraft structures and basic aero dynamics. Prerequisite: IAT 417 or equivalent.

IAT 495 INDEPENDENT STUDY (1-5) Specialized intensive study in an area of special interest to the student. Consent of faculty instructor required.

IAT 497 SPECIAL TOPICS (1-5) For a group of students who wish an intensive study of a topic not offered in the University. Consent of faculty supervisor and division director required.

## INDUSTRIAL TECHNOLOGY

ITE 300 INDUSTRIAL FINANCIAL DECISIONS (5) The accounting process and use of financial techniques and data in planning, controlling, and coordinating industrial activities. This course is intended to familiarize the student with the accounting concepts, analytical methods, and use of accounting information for purposes of operation and control.

ITE 301 INDUSTRIAL OPERATIONS (5) The industrial structure is studied to see how the various areas and functions are related to each other. The material covered should give the student an overview of the operations of the organization and an understanding of the fundamental principles of management which lead toward effective coordination and control.

ITE 312 AUTOMATION (5) A study of the technology of automation including the economics of management policies for the major industrial changes influencing automation planning.

ITE 324 QUALITY CONTROL (5) Modern concepts of managing the quality function of industry to maximize customer satisfaction at minimum quality cost. The economics of quality, process control, organization, quality improvement, vendor quality.

ITE 330 PRODUCTION PLANNING AND CONTROL I (5) Introduction to production planning and control concepts including their function within total planning, forecasting, estimating, processing instructions, and manpower allocations. Prerequisite: ITE 371 or equivalent.

ITE 331 PRODUCTION PLANNING AND CONTROL II (5) The functions of a production planning and control organization at work. Topics in the area of inventory control, scheduling, dispatching and flow control. Prerequisite: ITE 330 or equivalent.

ITE 350 SAFETY IN INDUSTRY (5) Introduces occupational safety and health hazards associated with mechanical systems, materials handling, electrical systems, and chemical processes. Illustrated controls through engineering revision, safeguarding and personal protective equipment. Emphasis placed on recognition, evaluation and control of occupational safety and health hazards.

ITE 351 CONSTRUCTION SAFETY (5) Introduces occupational safety hazards associated with the construction industry. Emphasis placed on recognition, evaluation and control of safety hazards particularly as they relate to the Occupational Safety and Health Act.

ITE 400 MATERIALS HANDLING (5) A survey of materials handling elements, the unit load, packaging, bulk handling, and the economics of materials handling. Improvement of existing handling methods, justification for handling equipment, special handling techniques, and the management of the materials handling divisions in the industrial organization.

ITE 401 PLANT LAYOUT (5) To effect the coordination of the physical plant facilities to combine the men, materials and machines necessary for operation in the most economical arrangement. Prerequisite: ITE 400 or equivalent.

ITE 410 INDUSTRIAL SALES (5) Fundamentals of technical sales. Analysis of buyer's needs. Experiments, trial runs and demonstrations. The sale of machinery, raw materials and technical services. Credit and financing considerations. Measures of performance. Case studies.

ITE 422 HUMAN FACTORS ENGINEERING (5) Examination of the ways to fit jobs and objects better to the nature and capacity of the human being. Lectures will review man's performance capability, singly and in groups in interacting with his work environment. Stresses the practical application of human factors principles.

ITE 423 METHOD IMPROVEMENT (5) Methods engineering and measurement of human work systems. Techniques for operation analysis, work measurement and work sampling. Predetermined motion-time systems and standard data development are explored. Prerequisite: ITE 301; Prerequisite or corequisite: Statistics.

ITE 440 INDUSTRIAL INFORMATION SYSTEMS (5) Introduction to system concepts. Planning design and implementation of information systems, decision-making with systems, and system organization. Prerequisite: MAS 300 or 311 or equivalent.

ITE 450 HEALTH HAZARDS IN INDUSTRY (5) A continuation of Safety in Industry. An introduction to OSHA regulations on health hazards. Instrumentation. Noise, radiation, and dust problems in the industry. Special hazards with solvents, asbestos, lead, silica, and other chemicals. OSHA compliance procedures. Prerequisite: ITE 350 or equivalent.

ITE 460 SAFETY MANAGEMENT (5) Basic concepts of safety management. Fundamentals of loss control, policies, accountability, measurement and appraisal of the safety function in industry. The technique of operations review. Systems safety. Motivation. Products safety. Case studies. Prerequisites: ITE 351 and ITE 450 or equivalent.

ITE 471 PERSONNEL RELATIONS (5) A study of the functions of personnel relations. Topics covered include determining job requirements, manpower requirements, selection, interviewing and counseling, tests, training, morale and motivation, job evaluation, wage classification, merit rating, and union-management relations.

ITE 474 INDUSTRIAL SUPERVISION (5) Overview of the supervisor's functions, responsibilities, and over-all role in management in industry.

ITE 476 MAINTENANCE PLANNING (5) A study of the maintenance function in the industrial setting including the planning and implementation of preventative maintenance techniques.

ITE 480 VALUE ANALYSIS (5) How to increase the value of products or services by holding quality while reducing costs, holding costs while increasing quality, or both with emphasis on material shortages. Specific steps of value analysis used to improve industrial problem solving.

ITE 485 ENGINEERING ECONOMY (5) The study of the economics of decision-making in business and industry. Includes an analysis of the concepts of break-even, least cost and the differences between alternatives when related to the time value of money. Budgeting, labor and the cost control, relative to the industrial engineering technologist, is also considered.

ITE 490 WOMEN IN INDUSTRY (5) Development of supervisory and technical skills for women in industrial operations. Practice in planning, organizing, decision-making, and employee direction with particular emphasis on the woman as supervisor, manager or in the technical profession.

ITE 495 INDEPENDENT STUDY (1-5) Specialized intensive study in an area of special interest to the student. Consent of faculty instructor required.

ITE 497 SPECIAL TOPICS (1-5) Specialized design program for a group of students who wish an intensive study of a topic not offered in the University. Consent of faculty instructor required.

## MECHANICAL ENGINEERING TECHNOLOGY

MET 300 MANUFACTURING PROCESSES I (5) An introduction into the processes used to convert raw materials into finished products. Includes information on casting, forging, machining, and forming (includes lab).

MET 310 FLUID POWER (5) A study of the development, transmission and utilization of power through fluid power circuits and controls (includes lab). Prerequisite: WQT 320 or equivalent.

MET 351 DYNAMICS (5) Study of the motion of particles and members applied to technical problems. Impact momentum and mechanical energy. Prerequisites: MAS 302, and CSN 351 or equivalent.

MET 353 BASIC MATERIALS (5) A study of ferrous and nonferrous metals and alloys. Includes atomic structure, bonding, and arrangements of atoms; phase diagrams; reactions within solid materials, and the interrelation of these to show how structure determines the properties of a material.

MET 360 MECHANICAL SYSTEMS IN CONSTRUCTION (5) A survey of plumbing, heating, air conditioning and ventilation systems for buildings (includes lab).

MET 362 MECHANICAL DESIGN I (5) Design analysis of elementary machine members including shafting, springs, screws, belts, clutches, brakes, chains, welds, and rivets. Prerequisites: MET 351, CSN 352 or equivalent.

MET 459 APPLIED THERMODYNAMICS (5) Fundamental concepts of basic thermodynamics, including thermodynamic properties and processes, first and second laws of thermodynamics and application of the principles to energy conversion systems, introduction to heat transfer (includes lab). Prerequisite: MAS 302.

MET 460 ENERGY SYSTEMS (5) Review of theory and engineering aspects of conventional energy conversions systems, fuels and combustion, fossil fuels, and nuclear power plants, Mechanical Engineering aspects of direct energy conversion (includes lab). Prerequisite: MET 459 or equivalent.

MET 461 HEAT TRANSFER (5) Fundamental concepts of conduction convection and radiation heat transfer including practical numerical analysis, in addition to conventional analytical and empirical methods. Prerequisites: MAS 302, MAS 311 and MET 459 or equivalent.

MET 452 MECHANICAL DESIGN II (5) Continuation of the design analysis of elementary machine members including lubrication, bearings, and gearing. Introduction to advanced analysis techniques. Prerequisite: MET 362.

MET 463 AIR CONDITIONING REFRIGERATION PRINCIPLES (5) The theory, operation and control of heat pump cooling and heating, chemical absorption cooling and steam jet refrigeration systems. Includes laboratory. Prerequisite: MET 459.

MET 464 AIR CONDITIONING DESIGN I (3) Psychrometry comfort; mechanical refrigeration; heat pumps; load calculators; cooling coil performance; heating and humidification; air distribution duct design fans. Prerequisite: MET 459.

MET 465 AIR CONDITIONING DESIGN II (3) Air conditioning systems; piping, pumps, hydronics; chillers, boilers, piping and combinations; cooling towers; heat recovery systems; automatic control; instruments. Prerequisite: MET 464.

MET 470 MECHANICAL LAB I (2) The most modern available testing equipment is used for experiment in hydraulics, fluid power equipment, internal combustion engines including the Stirling Cycle Hot Air Engine, gas turbines, steam turbines, boilers, centrifugal and axial fans, rotary and sliding van compressors, convection and radiation and solar energy. Prerequisite: MET 459.

MET 471 AIR CONDITIONING AND REFRIGERATION LAB (2) Experiments to be conducted in air conditioning, refrigeration, reverse cycle and strip heating, water cooling towers, automotive air conditioning, absorption refrigeration and solar energy applications to heating and cooling. Prerequisite: MET 459.

## TECHNOLOGY

TEY 320 TECHNOLOGY FOR OCCUPATIONAL THERAPY (5) The basic properties of woods and metals and the techniques used by occupational therapists in planning a project based on a hypothetical patient's problem.

TEY 355 TECHNICAL COMMUNICATIONS (3) The goal of this course is to give the student an understanding of the role of graphic and written language in the conception and communication of technical ideas. The course is flexible in order to accommodate different backgrounds in the students. Basic graphical methods including multiview and isometric drawings; flow diagrams; charts, graphs and diagrams; graphical presentation of data; use of resource materials in the library, and standards for written reports are discussed.

## TRANSPORTATION SYSTEMS

TRT 300 INTRODUCTION TO TRANSPORTATION SYSTEMS (5) Role of transportation in urban and regional development; elements of the transportation system; historical development of the U.S. transportation system; characteristics and design considerations of various modes.

TRT 402 TRAFFIC ENGINEERING TECHNOLOGY (5) Fundamentals of traffic; characteristics of the roadway, the vehicle and the human elements in the traffic stream; traffic studies; capacity analysis, parking studies; accident analysis.

TRT 412 TRAFFIC CONTROL DEVICES (5) Traffic signs and markings; introduction to the new international signs; traffic signalization; design and location of signals; maintenance of signals; traffic laws and regulations.

TRT 420 TRANSPORTATION PLANNING (5) Principles of transportation planning; origin-destination studies; methodology used in generating transportation plans; techniques for predicting and evaluating the consequences of various alternatives; transportation planning for the Dade County region.

TRT 500 ADVANCED TRANSPORTATION SYSTEMS (5) Examination of innovative transportation systems technology; technical feasibility; system attributes; energy requirements; marketability of proposed systems; probable effect on modal choice behavior; evaluation of possible applications to the Greater Miami area.

TRT 504 TRANSPORTATION MODELING (5) Analytical evaluation of trip generation; gravity models and other distribution techniques, assignment and modal split; mathematical modeling of each of the above phases; shortest path algorithm; critical review of existing models.

TRT 512 URBAN MASS TRANSIT PLANNING (5) The mass transportation problem; demand analysis and projection; marketing urban mass transit; existing urban mass transit systems in the U.S.; techniques for planning mass transit systems; governmental regulation and subsidies to the transportation sector.

## URBAN PLANNING

UPT 316 URBAN PLANNING CONCEPTS (5) Planning fundamentals; objectives and scope of urban planning; theories of land use patterns; population studies; cohort survival technique; employment studies; economic studies; estimating demand for various land usage.

UPT 410 PLANNING IMPLEMENTATION (5) Planning and the public; governmental agencies and their role; preparing a zoning ordinance; land subdivision; urban renewal.

UPT 411/URB 411 URBAN LAND USE PLANNING (5) Elements of the general land use plan; location and space requirements; the use of models in planning; development of the land use plan; policy plan; implementation.

UPT 418 ANALYSIS OF TECHNOLOGICAL SYSTEMS (5) Fundamental concepts of system analysis; types of systems; input-output relationship; positive and negative feedback control; generation of system alternatives; tradeoff and sensitivity analysis; elementary optimization techniques.

UPT 518 URBAN SYSTEM ANALYSIS (5) The urban area as a complex system; modeling the urban growth processes; statistical decision-making games; modeling and simulation; cost effectiveness; application of the theory; a systemwide view of the Miami area.

UPT 615/URB 615 URBAN AND REGIONAL ANALYSIS (5) Theories of urban and regional growth; economics of location and agglomeration; urban and regional social accounting; economic base analysis, input-output models, gravity models, linear programming. Urban structure and performance.

### WATER QUALITY TECHNOLOGY

WQT 320 APPLIED HYDRAULICS (5) A course to provide background in basic hydraulic technology. The fundamental theorems are studied first then applied to the collection and distribution of water and to the collection and treatment of wastewaters.

WQT 330 WATER RESOURCES (5) Study of the hydrologic cycle; ground and surface water occurrence and quality. Sanitary protection of groundwater supplies. Stream sanitation: sources of pollution and self-purification of polluted waters. Water quality management. Multi-purpose uses of water and water reuse. Determination of population, municipal, industrial, and agricultural water requirements.

WQT 332 WATER SUPPLY TECHNOLOGY (5) Rural and urban water supplies and distribution systems. Regional planning and development. Water treatment processes and disinfection. Laboratory experience with bacteriological, physical, and chemical parameters in water treatment.

WQT 365 POTAMOLOGY (5) Environmental assessment of lotic or running water ecosystems with particular emphasis on the technological reclamation of these systems. The Miami River and the canals of Dade County will serve as the laboratories for this course.

WQT 366 LIMNOLOGY (5) Environmental assessment of lentic or standing water ecosystems with particular emphasis on the technological reclamation of these systems. Prerequisite: WQT 365.

WQT 367 AQUATIC RESTORATION (5) Inclusive analysis of a specific aquatic environment with the specific objective of demonstrating technological means to control eutrophication and to rejuvenate the ecosystem. Prerequisites: WQT 365 and WQT 366.

WQT 368 MARINE TECHNOLOGY (5) Fundamental concepts of the biological, chemical, and physical dynamics of ocean systems.

WQT 420 FLUIDS TRANSPORT (5) An advanced course on hydraulics emphasizing the transport of fluids, gas dynamics, fluid machinery, energy transfer devices, rheology and principles of fluidics.

WQT 450 WASTEWATER PROCESSES I (5) Theory of and laboratory practice in the biological processes used in wastewater treatment. Design, operation, and control of unit operations and processes. Standard tests for the examination of wastewater.

WQT 451 WASTEWATER PROCESSES II (5) A continuation of WQT 450, Wastewater Processes I. Theory and laboratory practice of the physico-chemical processes in wastewater treatment including coagulation, flocculation, sedimentation, flotation, and disinfection. Advanced treatment methods. Standard tests for the examination of wastewater. Prerequisite: WQT 450.

WQT 452 WASTEWATER TREATMENT TECHNOLOGY (5) Analysis and design of conventional and advanced treatment plants for domestic, municipal and industrial wastewaters. Joint industrial-municipal collection of wastewaters and sewerage service charges. The regional approach to wastewater treatment.

WQT 468 MARINE PRODUCTS (5) A survey of the commercial items which may be harvested from the ocean.

WQT 590 INDUSTRIAL WASTEWATER TREATMENT (5) Characteristics and composition of industrial wastewaters. Sampling techniques and analysis. Treatment methods and disposal. Water conservation and reuse. Product recovery. Joint industrial-municipal collection and treatment of wastewaters. Sewerage service charges. Case studies.



# ROTC PROGRAMS
# AIR FORCE ROTC

Florida International University, in cooperation with the University of Miami, offers Air Force ROTC to full-time students through an enrollment agreement between the two institutions. All classes and leadership labs are taught on the University of Miami campus. Questions regarding the Air Force ROTC program should be directed to the Department of Aerospace Studies at the University of Miami.

LOWER DIVISION PREPARATION:

*Required Courses:* Aerospace Studies 100 and 200 (see remarks) (4 semesters credit)

*Remarks:* Lower division requirements may be waived if the student (1) is a veteran, or (2) is selected for a two-year (upper division only) program and attends a six-week preparatory camp before enrolling in AIS 301.

UPPER DIVISION PROGRAM:

*Required Courses:*
AIS 301, 302
AIS 401, 402

*Remarks:* Upper Division Program is designed to prepare interested and qualified students for commissioning as officers in the U.S. Air Force upon graduation. Students are furnished uniforms and textbooks and receive $100.00 per month during the academic year.

## ARMY ROTC PROGRAM

Florida International's ROTC Program is offered under a cross-enrollment agreement with the University of Miami. The classroom portion of the courses is taught at Florida International while the weekly drills are held at the University of Miami. Any questions should be referred to the Military Science Department at the University of Miami.

LOWER DIVISION PREPARATION:

*Required Courses:* Military Science I and II (See remarks)

*Remarks:* The lower division preparation may be waived if the student (1) is a veteran or (2) attends a basic camp prior to entering MIL 301.

UPPER DIVISION PROGRAM:

*Required Courses:*

MIL 301, 302
MIL 401, 402

*Remarks:* The program is designed to select interested and qualified individuals for entry into the U.S. Army at a management level. During the program, students will receive $100/month (for 10 months/year) and will attend a summer camp prior to commissioning as a second lieutenant.

## MARINE OFFICER PROGRAMS

Qualified students may apply for an officer program leading to a commission as a Second Lieutenant in the United States Marine Corps. Commissions are offered in both ground and aviation components. The Platoon Leaders Course (PLC) is offered to freshmen, sophomores and juniors who attend precommissioning training during the summer. Financial Assistance and Flight Indoctrination Programs are available. Qualified seniors attend twelve weeks of training in the Officer Candidate Course (OCC) after graduation. For details, contact the Placement Office or the Marine Officer Selection Officer when he is on campus.



# COURSE OFFERINGS

### AIR FORCE ROTC

AIS 301 FIRST YEAR ADVANCED (3) (F) Principal requisites for maintaining adequate national security forces. Functional processes and institutional structure involved in the formulation and implementation of U.S. defense policy.

AIS 302 FIRST YEAR ADVANCED (3) (W) Political, economic and social constraints affecting the formulation of U.S. defense policy. The impact of both technological and international developments upon strategic preparedness and the overall defense policy-making process.

AIS 401 SECOND YEAR ADVANCED (3) (F) Professionalism, responsibilities, the Military Justice System; leadership theory and practices; management tools, principles, practice; problem solving.

AIS 402 SECOND YEAR ADVANCED (3) (W) Continuation of AIS 401.

# COURSE OFFERINGS

### ARMY ROTC

MIL 301 MILITARY LEADERSHIP AND MOTIVATION (3) (ADVANCED MS III) A behavioral science approach to military leadership and motivation with emphasis on crisis-oriented organizations.

MIL 302 ADVANCED MILITARY III (3) Applied tactics; principles and fundamentals of tactical operations. Advanced leadership.

MIL 401 ADVANCED MILITARY SCIENCE IV (3) World power relationships: world change and military implications. Applied leadership. Military administration and justice.

MIL 402 ADVANCED MILITARY SCIENCE IV (3) Theory and dynamics of the military team. Applied leadership.

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# FLORIDA INTERNATIONAL UNIVERSITY

## Administration, Faculty, and Staff as of April 1, 1976

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President (Interim) ..... Harold Bryan Crosby

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Associate Vice President for Academic Affairs ..... Robert C. Fisher
Assistant Vice President for Academic Affairs ..... Nancy Lee Goodwin

**Division of Sponsored Research and Training**

Director ..... Ulysses Van Spiva

**Institutional Research**

Director ..... Nancy L. Goodwin
Assistant Director ..... Barry Greenberg

**International Affairs Center**

Dean (Acting) ..... Vacant
Coordinator ..... John F. Bender

**Libraries**

Director ..... Howard W. Cordell
Assistant Director, Tamiami Campus ..... Julia A. Woods
Assistant Director, FIU at North Miami ..... Teddy Kassner
Collection Development Librarian, Interama ..... Leslie Ming
International Affairs Librarian ..... Elizabeth H. Peeler
Acquisitions Librarian ..... H. Juanita Flanders
Associate Catalog Librarian ..... Marion Goslinga
Assistant Catalog Librarian ..... John Radencich
Assistant Catalog Librarian ..... Robert Stack
Assistant Catalog Librarian ..... Jacqueline M. Zelman
Circulation Librarian ..... Kathryn Harris
Documents Librarian ..... Josefina Rodriguez
Gifts and Exchange Librarian ..... Esther B. Gonzalez
Reference Librarian ..... Muriel C. Efron
Associate Reference Librarian ..... Margaret Tripp
Assistant Reference Librarian ..... Calvin Burkhart
Assistant Reference Librarian ..... Rychard Cook
Serials Librarian ..... Caroline J. Barker
Assistant Serials Librarian ..... Shirley Brosch
Special Collections Librarian ..... H. Minnie Dunbar

**Media Center**

Director of Media Division ..... A. F. Edmunds
Director of Instructional Media ..... Arthur D. Waugh
Associate Director of Media ..... David L. Wilson
Assistant Director of Audiovisual ..... Edward Briois
A. V. Librarian ..... Lynn M. Mitchroney
A. V. Librarian ..... Lucy A. Parsons
A. V. Materials Manager ..... Ken Bailey
A. V. Materials Manager ..... Abe Blitz

A. V. Specialist ..... Joan Elefante
Illustrator II ..... Susan Alvarez
Illustrator II ..... Terry T. McKinney
Illustrator II ..... Rene Pascual
Radio/TV Engineer ..... Ron Durst
Learning Resources Specialist ..... Leila A. Walker
Photographer ..... Andrew R. Banks

**Minority Affairs and Women's Concerns**

Director ..... Francena Thomas

**Registrar**

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Associate Registrar ..... Judy M. Merritt
Director of Admissions and Community College Relations ..... Douglas Hartnagel
Assistant Director of Admissions and
Community College Relations ..... Mark Marangella
Articulation Officer ..... Diann Zeldman
Admissions Counselor ..... Ozzie Ritchey
Director of Registration and Records ..... William F. Younkin
Assistant Director of Registration and Records ..... Fran Sabbagh

**Student Services**

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Associate Dean ..... Don R. Brusha
Coordinator of Career Planning and Placement
and Cooperative Education Programs ..... Richard L. Estadt
Director of Cooperative Education ..... Patrick J. Russell
Director of Career Planning & Placement ..... Karel S. King
Career Counselor ..... Olga Martin
Foreign Student Advisor ..... Ellen Storob Karsh
Director of Veterans Programs & Services ..... Leonard Bryant, Jr.
Director of Financial Aid ..... John A. Agett
Financial Aid Counselor ..... Emma E. Olson
Financial Aid Counselor ..... Phil Hamilton
Coordinator of Student Activities ..... Lillian L. Kopenhaver
Assistant Coordinator of Student Activities ..... Thomas Riley

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- English ..... Harry T. Antrim
- Fine Arts
  - Art ..... Francis Wyroba
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  - Theatre (Program) ..... Philip Giberson
- History ..... Darden A. Pyron
- International Relations ..... Ken Boodhoo
- Liberal Studies (Program Director) ..... Melbourne Cummings
- Mathematical Sciences ..... Samuel S. Shapiro
- Modern Languages (Acting) ..... Frances Aid
- Philosophy and Religion ..... George Kovacs
- Physical Sciences ..... John S. Sheldon
- Political Science ..... Joyce Lilie
- Psychology ..... Ronald S. Tikofsky
- Sociology and Antropology ..... Barry Levine

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ANTRIM, HARRY, Ph.D. (University of Florida), Chairperson and Professor, English
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BROWN, JERRY, Ph.D. (Cornell University), Associate Professor, Sociology and Anthropology
BURKE, WILLIAM, M.F.A. (S.U.N.Y., New Paltz, N.Y.), Assistant Professor, Fine Arts
CALLAWAY, KATHLEEN, M.A. (University of Virginia), Assistant Professor, English
CASCIO, WAYNE, Ph.D. (University of Rochester), Assistant Professor, Psychology
CASEY, THOMAS, JR., Ph.D. (Tulane University), Associate Professor, Economics
CHAI, CHARLES, Ph.D. (University of Connecticut), Associate Professor, Political Science
CHEN, CHUN-FAN, Ph.D. (University of Michigan), Assistant Professor, Biological Sciences
CLEM, RALPH, Ph.D. (Columbia University), Assistant Professor, International Relations
COMFORT, JOHN C., Ph.D. (Case Western Reserve University), Assistant Professor, Mathematical Sciences
COUPER, JAMES, M.A. (Florida State University), Associate Professor, Fine Arts
CROSBY, JAMES, Ph.D. (Yale University), Professor, Modern Languages
CROWN, BARRY, Ph.D. (Florida State University), Visiting Interim Associate Professor, Psychology
CUERVO, LEON, Ph.D. (University of Maryland), Chairperson and Associate Professor, Biological Sciences
CUMMINGS, MELBOURNE, Ph.D. (University of California at Los Angeles), Assistant Professor, English — Director, Liberal Studies
DUNN, MARVIN, Ph.D. (University of Tennessee), Associate Professor, Psychology
DWYER, RICHARD, Ph.D. (University of California at Los Angeles), Professor, English
ELKINS, CHARLES, Ph.D. (Southern Illinois University), Associate Professor, English
FINK, PHILIP, Ph.D. (University of Miami), Professor and Chairman, Music
FINLEY, GORDON, Ph.D. (Harvard University), Associate Professor, Psychology
FISHER, ROBERT, Ph.D. (University of Kansas), Associate Vice President for Academic Affairs, and Professor, Mathematical Sciences
FLANDERS, JAMES, Ph.D. (Vanderbilt University), Associate Professor, Psychology
GHAI, GAURI, Ph.D. (Iowa State University), Assistant Professor, Mathematical Sciences
GIBERSON, PHILIP, JR., M.A. (Memphis State University), Chairperson and Associate Professor, Theatre
GIRDEN, EDWARD, Ph.D. (University of Illinois), Distinguished Professor, Psychology
GOLDBERG, WALTER, Ph.D. (University of Miami), Assistant Professor, Biological Sciences

GONZALES de MENDOZA, RAMON, Ph.D. (Frei Universitat, Berlin), Professor, Modern Languages
GONZALEZ-REIGOSA, FERNANDO, Ph.D. (Florida State University), Associate Professor, Psychology
GOTTERER, MALCOLM, D.B.A. (Harvard University), Professor, Mathematical Sciences
GOTTLIEB, JOEL, Ph.D. (University of California at Riverside), Assistant Professor, Political Science
GROSS, MICHAEL, Ph.D. (University of Pittsburgh), Assistant Professor, Mathematical Sciences
GUERS-VILLATE, YVONNE, Ph.D. (Bryn Mawr College), Visiting Professor, Modern Languages
HALL, JAMES, Ph.D. (University of Utah), Assistant Professor, English
HARDY, KENNETH, Ph.D. (Tulane University), Associate Professor, Physical Sciences
HARTLEY, ALAN, Ph.D. (University of California at Irvine), Assistant Professor, Psychology
HARTLEY, JOELLEN, Ph.D. (University of California at Irvine), Assistant Professor, Psychology
HELMING, JOANNA, M.A. (Memphis State University), Assistant Professor, Theatre
HERRIOTT, ARTHUR, Ph.D. (University of Florida), Associate Professor, Physical Sciences
HUCHINGSON, JAMES, M.Div. (Emory University), Assistant Professor, Philosophy and Religion
JACEWITZ, MARION, Ph.D. (The Johns Hopkins University), Assistant Professor, Psychology
JACOBS, ELLEN, M.S. (Illinois Institute of Technology), Associate Professor, Fine Arts
KAMINSKY, HOWARD, Ph.D. (University of Chicago), Professor, History
KANDEL, RANDY, Ph.D. (City University of New York), Assistant Professor, Sociology and Anthropology
KELLER, LEONARD, Ph.D. (Yale University), Associate Professor, Physical Sciences
KESELMAN, JOSE, B.A. (City College of New York), Assistant Professor, Political Science
KLIMMER, RICHARD, M.A. (Marquette University), Assistant Professor, History
KONKEL, RICHARD, Ph.D. (Bowling Green University), Interim Vice Provost, FIU at North Miami and Associate Professor, Philosophy and Religion
KOVACS, GEORGE, Ph.D. (University of Louvain), Associate Professor and Chairperson, Philosophy and Religion
KRAYNEK, WILLIAM, Ph.D. (Carnegie-Mellon University), Associate Professor, Mathematical Sciences
KURTINES, WILLIAM, Ph.D. (The Johns Hopkins University), Assistant Professor, Psychology
KUSHNER, THOMASINE, M.A. (University of Miami), Assistant Professor, Philosophy and Religion
LANGER, SANDRA, Ph.D. (New York University), Assistant Professor, Fine Arts
LAWSON, LINDA, Ph.D. (University of Tennessee), Assistant Professor, Mathematical Sciences
LEED, ERIC, Ph.D. (University of Rochester), Associate Professor, History
LEEDS, MARIE, M.A. (University of Miami), Assistant Professor, Music
LEVINE, BARRY, Ph.D. (New School for Social Research), Associate Professor and Chairperson, Sociology and Anthropology
LILIE, JOYCE, Ph.D. (John Hopkins University), Chairperson and Associate Professor, Political Science
LYLE, JACK, M.F.A. (University of South Florida), Assistant Professor, Fine Arts
MAINGOT, ANTHONY, Ph.D. (University of Florida), Associate Professor, Sociology and Anthropology
MARTINEZ, ZAIDA, M.A. (Pennsylvania State University), Instructor, Physical Sciences
McARTHUR, JAMES, Ph.D. (Stanford University), Assistant Professor, Biological Sciences

McELFRESH, CLAIR, D.M.A. (Case Western Reserve University), Associate Professor, Fine Arts
McLAUGHLIN, PATSY, Ph.D. (George Washington University), Courtesy Associate Professor, Biological Sciences
MAURRASSE, FLORENTIN, Ph.D. (Columbia University), Assistant Professor, Physical Sciences
MINTZ, STEPHAN, Ph.D. (Johns Hopkins University), Assistant Professor, Physical Sciences
MONCARZ, RAUL, Ph.D. (Florida State University), Associate Professor, Economics
MOORE, HOWARD, Ph.D. (University of Arkansas), Professor, Physical Sciences
MORAN, GARY, Ph.D. (University of Nijmegen), Professor, Psychology
MORGANSTERN, RALPH, Ph.D. (State University of New York at Stony Brook), Associate Professor, Physical Sciences
MURISON, GERALD, Ph.D. (Johns Hopkins University), Associate Professor, Biological Sciences
NELSON, BRIAN, Ph.D. (University of California at Riverside), Assistant Professor, Political Science
NICASTRI, JOSEPH, M.A. (State University of New York), Assistant Professor, Fine Arts
OBATA, YOSHIHIRO, Ph.D. (Michigan State University), Assistant Professor, Music
OKUBO, CASE, Ph.D. (University of Guelph), Assistant Professor, Biological Sciences
OLANDER, JOSEPH, D., Ph.D. (Indiana University), Associate Professor, Sociology and Anthropology (On Leave-of-Absence)
OSBORNE, WILLIAM, JR., Ph.D. (Emory University) Associate Professor, Sociology and Anthropology
PARKER, JANAT, Ph.D. (University of California, Berkeley), Associate Professor, Psychology
PARKER, JOHN, Ph.D. (University of California, Berkeley), Associate Dean of the College and Associate Professor, Physical Sciences
PETERSON, BRIAN, Ph.D. (University of Wisconsin), Assistant Professor, History
PYRON, DARDEN ASBURY, Ph.D. (University of Virginia), Chairperson and Assistant Professor, History
REID, JAMES, M.A. (Fisk University), Assistant Professor, Sociology and Anthropology
ROBERTS, CAROLYN, M.A. (University of Colorado), Instructor, Mathematical Sciences
ROCK, HOWARD, Ph.D. (New York University), Assistant Professor, History
ROHM, JOSEPH, Ph.D. (Florida State University), Assistant Professor, Music
ROSS, LAMAR, Ph.D. (University of Georgia), Assistant Professor, Sociology and Anthropology
SANCHEZ, CANDIDO, M.S. (University of Notre Dame), Instructor, Mathematical Sciences
SANCHEZ, REINALDO, Ph.D. (Washington University), Associate Professor, Modern Languages
SAPER, BERNARD, Ph.D. (University of California at Los Angeles), Professor, Psychology
SAYEED, USMAN, Ph.D. (University of Nebraska), Assistant Professor, Physical Sciences
SELMON, JOE, M.F.A. (Memphis State University), Assistant Professor, Theatre
SHAPIRO, SAMUEL S., Ph.D. (Rutgers University), Chairperson and Associate Professor, Mathematical Sciences
SHELDON, JOHN, Ph.D. (Texas A & M University), Chairperson and Associate Professor, Physical Sciences
SHERSHIN, ANTHONY, Ph.D. (University of Florida), Associate Professor, Mathematical Sciences
SILEO, NICHOLAS, Ph.D. (Florida State University), Associate Professor, Sociology and Anthropology
SLIFKER, JAMES, Ph.D. (University of Notre Dame), Associate Professor, Mathematical Sciences
SMITH, JUDITH HOCH, Ph.D. (McGill University) Assistant Dean of the College and Assistant Professor, Sociology and Anthropology

STEIN, ABRAHAM, Ph.D. (University of Southern California), Professor, Biological Sciences
SU, HUI-YANG (David), M.B.A. (University of Rochester), Assistant Professor, Mathematical Sciences
THOMAS, BABATUNDE, Ph.D. (Indiana University), Chairperson and Associate Professor, Economics
TIKOFSKY, RONALD, Ph.D. (University of Utah), Chairperson and Professor, Psychology
TWYMAN, TERRY, M.A. (Memphis State University), Instructor, Theatre
VAGRAMIAN, VIOLET, Ph.D. (University of Miami), Assistant Professor, Music
VIZCAINO, MARIO, S.T.L. (Gregorian University, Rome), Assistant Professor, Philosophy and Religion
VOLCANSEK, MARY, Ph.D. (Texas Technological University), Assistant Professor, Political Science
WATSON, DONALD, Ph.D. (University of Virginia), Assistant Professor, English
WATSON ESPENER, MAIDA, M.A., (University of Florida), Assistant Professor, Modern Languages
WAUGH, BUTLER H., Ph.D. (Indiana University), Professor, English
WELCH, MARCELLE, Ph.D. (University of Michigan), Assistant Professor, Modern Languages
WILKINS, MIRA, Ph.D. (Cambridge University), Professor, Economics
WILLIAMS, KATHRYN, Ph.D. (Florida State University), Assistant Professor, Physical Sciences
WILLIAMS, WILLIE E., Ph.D. (Michigan State University), Associate Professor, Mathematical Sciences
WYROBA, FRANCIS, M.A. (Columbia University), Chairperson and Professor, Fine Arts
YUDIN, FLORENCE, Ph.D. (University of Illinois), Professor, Modern Languages

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Finance and Accounting ..... Harvey S. Hendrickson
Management ..... Steven Altman
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Public Administration ..... George Sutija

**Faculty**

AGRAWAL, SURENDRA P., Ph.D. (University of Florida), Associate Professor, Finance and Accounting
ALTMAN, STEVEN, D.B.A. (University of Southern California), Assistant Professor and Chairperson, Management
AZAN, REINALDO L., M.B.A. (Farleigh Dickinson University) C.P.A., Instructor, Finance and Accounting
BEATON, WILLIAM R., Ph.D. (Ohio State University), Professor, Policy, Marketing and Environment
BUTKOVICH, Paul, Ph.D. (Yale University), Assistant Professor, Management
CASCIO, WAYNE, Ph.D. (University of Rochester), Assistant Professor, Management
CHANG, LUCIA S., Ph.D. (University of Texas at Austin), Assistant Professor, Finance and Accounting
COCHRAN, MARTHA A., M.P.H. (University of North Carolina), Instructor, Management
DESSLER, GARY, Ph.D. (City University of New York), Associate Professor and Associate Dean, School of Business and Organizational Sciences
DIXON, THOMAS J., M.A., (University of Florida), Lecturer, Policy, Marketing and Environment
DORSETT, HERMAN W., Ed.D. (Columbia University), Associate Professor, Management

ERICKSON, ALF L., LL.M (University of London), Assistant Professor, Policy, Marketing and Environment
FAIR, DONALD W., M.Acc. (Bowling Green State University), C.P.A. Instructor, Finance and Accounting
FANTL, IRVING L., Ph.D. (New York University), C.P.A., Professor, Finance and Accounting
FRIDAY, EARNEST, M.B.A. (University of Cincinnati), Instructor, Management
HALLBAUER, ROSALIE C., Ph.D. (University of Florida), Assistant Professor, Finance and Accounting
HEBERT, JOHN E., Ph.D. (Purdue University), Assistant Professor, Management
HEISE, J. ARTHUR, Ph.D., (Syracuse University), Assistant Professor, Public Administration
HENDRICKSON, HARVEY S., Ph.D. (University of Minnesota), C.P.A., Professor and Chairperson, Finance and Accounting
HOGNER, ROBERT, Ph.D., (University of Pittsburgh), Assistant Professor, Policy, Marketing, and Environment
JEROME, WILLIAM T., D.C.S. (Harvard University), Distinguished University Professor, Management
JURGENSEN, EDGARD, D.B.A. (Harvard University), Associate Professor, Finance and Accounting
KALOGERAS, CONSTANTINE, Ph.D. (City University of New York), Assistant Professor, Finance and Accounting
KLEIN, DIETER, Ph.D. (University of California at Berkeley), Assistant Professor, Management
LAVIN, DAVID, Ph.D. (University of Illinois), C.P.A., Assistant Professor, Finance and Accounting
LERNER, HERBERT, Ph.D. (New York University), Professor, Management
LUBELL, MYRON, M.B.A. (University of Miami), C.P.A., Assistant Professor, Finance and Accounting
LUYTJES, JAN B., Ph.D. (University of Pennsylvania), Professor, Policy, Marketing and Environment
MAGEE, LINDA, M.B.A. (University of Miami), Instructor, Policy, Marketing and Environment
MAGNUSEN, KARL, Ph.D. (University of Wisconsin), Associate Professor, Management
MARTIN, ALBERT J., Ph.D. (Ohio State University), Associate Professor, Policy, Marketing and Environment
MEREDITH, JACK R., Ph.D. (University of California at Berkeley), Associate Professor, Management
MILLS, JOAN P., Ph.D. (University of South Carolina), Assistant Professor, Management
MOST, KENNETH S., Ph.D. (University of Florida), C.P.A., Professor, Finance and Accounting
NELSON, EDWARD A., Ph.D. (University of California at Los Angeles), Associate Professor, Management
NICHOLLS, J.A.F., D.B.A. (Indiana University), Associate Professor and Chairperson, Policy, Marketing and Environment
NUNEZ, LEANDRO S., M.B.A. (Roosevelt University), Instructor, Finance and Accounting
PARK, MYUNG, Ph.D. (University of Southern California), Assistant Professor, Public Administration
PARKER, ALAN J., Ph.D. (Columbia University), Associate Professor, Management
PATKA, THOMAS JOSEPH, Ph.D. (Syracuse University), Assistant Professor, Public Administration
REESE, CRAIG E., M.B.A. (St. Mary's University), Assistant Professor, Finance and Accounting
RIBLETT, JOHN E., M.B.A. (University of Tennessee), Assistant Dean and Instructor, Policy, Marketing and Environment
RIZZO, ANN-MARIE, Ph.D. (Syracuse University), Assistant Professor, Public Administration
ROBERTSON, TERRY D., Ph.D. (University of Georgia), Assistant Professor, Policy, Marketing and Environment

RODRIGUEZ, LEONARDO, D.B.A. (Florida State University), Assistant Professor, Finance and Accounting
SEATON, F. BRUCE, Ph.D. (Washington University), Assistant Professor, Policy, Marketing and Environment
SHAPIRO, GLORIA, M.A. (University of Miami), Instructor, Management
SILBEY, VALDUR, Ph.D. (University of Pennsylvania), Assistant Professor, Management
SIMMONS, GEORGE B., D.B.A. (Indiana University), Professor and Dean, School of Business and Organizational Sciences
SLUTSKY, LOIS, M.S.M. (Florida International University), C.P.A., Instructor, Finance and Accounting
STOWE, JOHN D., Ph.D. (University of Houston), Assistant Professor, Finance and Accounting
SUTIJA, GEORGE, M.B.A. (Columbia University), Associate Professor and Associate Dean, School of Business and Organizational Sciences
TAGGART, WILLIAM M., Ph.D. (University of Pennsylvania), Associate Professor, Management
TANNER, W. LYNN, Ph.D. (Syracuse University), Assistant Professor, Public Administration
TAYLOR, MICHAEL R., Ph.D. (Washington University), Assistant Professor, Policy, Marketing and Environment
TURBAN, EFRAIM, Ph.D. (University of California at Berkeley), Professor, Management
VALENZI, ENZO R., Ph.D. (Bowling Green University), Associate Professor, Management
VOGEL, RONALD H., Ph.D. (University of Michigan), Assistant Professor, Policy, Marketing and Environment
WELCH, WILLIAM W., Ph.D. (University of Michigan), Assistant Professor, Finance and Accounting
YEAMAN, DORIA, J.D. (University of Tennessee), Lecturer, Policy, Marketing and Environment

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Dean ..... G. Wesley Sowards
Associate Dean ..... Paul D. Gallagher
Chairpersons:
Health & Physical Education & Recreation ..... Paul E. Hartman
General Professional Education & Educational Administration ..... Peter F. Oliva
Secondary Education ..... Robert Shostak
Psycho-Educational Services ..... Donald C. Smith
Childhood Education ..... Nicholas J. Vigilante
Vocational & Adult Education ..... Henry R. Ziel

**Faculty**

ALVAREZ, CARLOS M., Ph.D. (University of Florida), Assistant Professor, Psycho-Educational Services
ANDERSON, ROBERT E., Ed.D. (University of Miami), Assistant Professor, Psycho-Educational Services
BAUM, ROSEMERE, Ph.D. (Pennsylvania State University), Assistant Professor, Vocational and Adult Education
BLUCKER, JUDITH A., Ph.D. (Florida State University), Associate Professor, Health, Physical Education and Recreation
CAMPBELL, RICHARD, Ed.D. (Indiana University), Assistant Professor, Childhood Education
CHADWICK, IDA F., Ph.D. (Florida State University), Assistant Professor, Health, Physical Education and Recreation
CHEYNEY, WENDY, Ed.D. (University of Miami), Assistant Professor, Psycho-Educational Services
CLARK, LORINE, M.Ed. (University of Miami), Counselor, School of Education
CLARK, SANDRA, Ed.D. (University of California at Los Angeles), Dean, Student Services; Assistant Professor, Psycho-Educational Services

CRABTREE, MYRNA P., Ed.D (Teachers College, Columbia University), Professor, Vocational Education
CROCKER, MARY R., Ph.D. (Pittsburgh University), Assistant Professor, Psycho-Educational Services
DEMPSEY, ARTHUR, Ed.D. (University of Arizona), Associate Professor, Childhood Education
DIVITA, CHARLES, JR., Ph.D. (Florida State University), Associate Professor, Adult Education
EDELSKY, CAROLE, Ph.D. (University of New Mexico), Assistant Professor, Childhood Education
FAIN, STEPHEN M., Ed.D. (Teachers College, Columbia University), Associate Professor, General Professional Education
FARRELL, ROBERT V., Ph.D. (Teachers College, Columbia University), Assistant Professor, General Professional Education
FISHER, ALLEN, Ph.D. (University of Connecticut), Assistant Professor, General Professional Education
FLEMING, A. WILLIAM, Ph.D. (University of Wisconsin), Assistant Professor, Health, Physical Education and Recreation
GALLAGHER, PAUL D., Ph.D. (Florida State University), Associate Dean and Associate Professor, School of Education
GAVILAN, MARISAL, Ed.D. (University of Tennessee), Assistant Professor, Psycho-Educational Services
GAY, LORRAINE R., Ph.D. (Florida State University), Associate Professor, General Professional Education
GOERKE, GLENN A., Ph.D. (Michigan State University), Vice President for Community Affairs, Professor, Adult Education
GRANDCHAMP, ROBERT, Ph.D. (University of Illinois), Assistant Professor, General Professional Education
GREENBERG, BARRY, Ph.D. (New York University), Assistant Director, Institutional Research; Assistant Professor, General Professional Education
GURUCHARRI, KATHLEEN A., Ph.D. (University of Miami), Assistant Professor, Childhood Education
HARTMAN, PAUL E., Ph.D. (Ohio State University), Chairperson and Professor, Health, Physical Education and Recreation
HAUENSTEIN, A. DEAN, Ph.D. (Ohio State University), Professor, Vocational Education
JENKINS, WILLIAM A., Ph.D. (University of Illinois), Vice President for Academic Affairs and Professor, Childhood Education
KAMPSNIDER, JOHN J., Ph.D. (University of Utah), Associate Professor, General Professional Education
KENNEDY, DANIEL A., Ed.D. (University of Oregon), Associate Professor, Psycho-Educational Services
LOPEZ, RICHARD, M.A. (Lehman College), Instructor, Health, Physical Education and Recreation
LUCKY, LURETHA, Ed.D. (Arizona State University), Assistant Professor, Psycho-Educational Services
McCLINTOCK, C. EDWIN, Ed.D. (University of Georgia), Assistant Professor, Mathematics Education
MARGOLIN, EDYTHE, Ed.D. (University of California), Associate Professor, Childhood Education
MARTINEZ, LUIS A., Ph.D. (Florida State University), Assistant Professor, Science Education
MATHEWSON, GROVER, Ph.D. (University of California at Berkeley), Assistant Professor, Childhood Education
MENDOZA, ALICIA, Ed.D. (University of Miami), Assistant Professor, Childhood Education
MERCHANT, FRANK M. JR., Ed.D. (Florida Atlantic University), Assistant Professor, Health, Physical Education and Recreation
MOHAMED, DOMINIC A., Ph.D. (University of Minnesota), Assistant Professor, Vocational Education
MUSGRAVE, SHIRLEY H., Ph.D. (Florida State University), Associate Professor, Art Education

NATHANSON, DAVID E., Ph.D. (University of Minnesota), Assistant Professor, Psycho-Educational Services
NOVILLIS, CAROL F., Ph.D. (University of Texas at Austin), Assistant Professor, Childhood Education
OLIVA, PETER F., Ed.D. (Teachers College, Columbia University), Chairperson and Professor, General Professional Education and Educational Administration
PELL, SARAH W. J., Ed.D. (Duke University), Assistant Professor, General Professional Education
PENNINGTON, CLEMENT, Ed.D. (Pennsylvania State University), Assistant Professor, Art Education
PERRY, RONALD W., Ed.D. (Louisiana State University), Assistant Professor, Health, Physical Education and Recreation
POWELL, TONI, Ph.D. (Florida State University), Assistant Professor, Vocational and Adult Education
REICHBACH, EDWARD M., Ed.D. (Wayne State University), Assistant Professor, Childhood Education
REMBERT, EMMA W., Ed.D. (Syracuse University), Associate Professor, Childhood Education
RYAN, COLLEEN A., Ph.D. (Ohio State University), Associate Professor, Psycho-Educational Services
SHOSTAK, ROBERT, Ph.D. (University of Connecticut), Chairperson and Associate Professor, Secondary Education
SMITH, DONALD C., Ph.D. (Syracuse University), Chairperson and Professor, Psycho-Educational Services
SOWARDS, G. WESLEY, Ed.D. (Stanford University), Dean and Professor, School of Education
STINSON, JOHN JR., Ph.D. (University of Connecticut), Assistant Professor, Childhood Education
STRICHART, STEPHEN S., Ph.D. (Yeshiva University), Associate Professor, Psycho-Educational Services
SULLIVAN, ZOLA J., Ph.D. (University of Illinois), Associate Professor, Childhood Education
TESTA, ROBERT F., Ph.D. (University of Miami), Assistant Professor, Music Education
TOOMER, JETHRO, Ph.D. (Temple University), Associate Professor, Psycho-Educational Services
TUCKER, JAN L., Ph.D. (Indiana University), Associate Professor, Social Studies Education
VIGILANTE, NICHOLAS J., Ph.D. (Ohio State University), Chairperson and Professor, Childhood Education
WAGNER, MICHAEL J., Ph.D. (Florida State University), Assistant Professor, Music Education
WELLS, JAMES D., Ed.D. (University of Florida), Associate Professor, General Professional Education
WONDERLING, THOMAS H., Ed.S. (Bowling Green State University), Assistant Professor, Health, Physical Education and Recreation
ZIEL, HENRY R., Ed.D. (Wayne State University), Chairperson and Professor, Vocational and Adult Education

**School of Health and Social Services**

Dean ..... Raul Cuadrado
Assistant Dean ..... Rosebud L. Foster
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Coordinator, Academic Advisement and Counseling ..... Rose T. Watson
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- Dietetics and Nutrition ..... Penelope S. Easton
- Health Science (Acting) ..... Glenda L. Benedict
- Medical Technology ..... Margaret E. Waid
- Nursing (Acting) ..... Mary Cavallo
- Occupational Therapy ..... F. Genevieve Antonson

Physical Therapy (Acting) ..... Roger C. Skovly
Social Work ..... L. Yvonne Bacarisse
Home Economics (Coordinator) ..... Evelyn J. Milliken

**Faculty**

ALTOMARE, JOAN E., M.T. (A.S.C.P.), B.A. (Marywood College), Clinical Instructor, Medical Technology
ANTONSON, F. GENEVIEVE, Ph.D., O.T.R. (Florida State University), Chairperson and Associate Professor, Occupational Therapy
BACARISSE, YVONNE L., M.S.W., A.C.S.W. (Tulane University) Chairperson and Associate Professor, Social Work
BENEDICT, GLENDA L., M.A. (University of Miami), Associate Professor, Health Science
BOHNERT, SHIRLEY, R.N., C.N.M., M.S. (Boston College), Assistant Professor, Nursing
BRELLIS, HAZEL, R.N., M.P.H., (Yale University), Assistant Professor, Nursing
CAVALLO, MARY, R.N., M.A. (New York University), Associate Professor and Acting Chairperson, Nursing
CAWLEY, DUDLEY O., M.S.W., D.P.A. (New York University), Associate Professor, Criminal Justice
CLARK, HARCOURT, M.S.P.A., (Florida International University), Assistant Professor, Criminal Justice
CLARK, ROBERT S., Ph.D., L.L.D. (New York University), Associate Professor, Criminal Justice
CLOUSTON, OFELIA, R.N., M.N. (Emory University), Assistant Professor, Nursing
COPLOWITZ, ESTHER, R.N., M.S. (University of Arizona), Assistant Professor, Nursing
CUADRADO, RAUL R., Dr. Ph., (University of Michigan), Professor and Dean, School of Health and Social Services
CURRY, KATHERINE R., Ph.D., R.D. (Southern Illinois University) Associate Professor, Dietetics and Nutrition
DUNEVITZ, BURTON J., M.S. (University of Nebraska), Assistant Professor, Physical Therapy
EASTON, PENELOPE S., Ph.D., R.D. (Southern Illinois University) Chairperson and Professor, Dietetics and Nutrition
FOSTER, ROSEBUD L., R.N., M.S.N.E. (Wayne State University), Assistant Dean and Associate Professor, Health Science
GREEN, JO RUTAN, M.Ed. (University of Miami), Assistant Professor, Home Economics
GORDON, BARRY R., M.S.W., A.C.S.W. (University of Michigan), Assistant Professor, Social Work
GRENNARD, JEAN, M.Ed. (University of Miami), Assistant Professor, Health Science
HAMERSLEY, BRUCE, M.S. (University of Miami), Associate Professor, Criminal Justice
HIGGINS, TERRY, M.S., R.P.I. (Medical College of Virginia), Assistant Professor, Physical Therapy
HIMBURG, SUSAN P., M.S., R.D. (Emory University), Assistant Professor, Dietetics and Nutrition
HOGGES, RALPH, M.Ed. (Tuskegee Institute), Administrative Assistant to the Dean
JONES, ROSA L., M.S.W., A.C.S.W. (Florida State University), Associate Professor and Director of Field Instruction, Social Work
KEANE, MICHELE W., M.S., R.D. (Case Western Reserve University), Assistant Professor, Dietetics and Nutrition
KRUSE, BARBARA S., M.P.H., R.D. (University of California), Instructor, Dietetics and Nutrition
LANDSEA, BONNIE D., M.S., R.D. (Florida International University), Instructor, Dietetics and Nutrition
LIEBMAN, DAVID B., M.H.A. (Virginia Commonwealth University), Assistant Professor, Coordinator, External Degree, Health Science

MARQUES, JOSE A., M.S.W., L.L.D. (University of Havana), Acting Chairperson; Director of Field Internship; Coordinator, Continuing Education; and Assistant Professor, Criminal Justice
MCCURDY, LAVONDA, M.S. (Florida State University), Instructor, Home Economics
MEYER, PETER, M.S.W., Ph.D. (New York University), Professor, Social Work
MILLIKEN, EVELYN J., M.S. (Florida State University), Coordinator and Assistant Professor, Home Economics
MOONEYHAN, ESTHER, R.N., Ed.D. (Indiana University), Associate Professor, Nursing
MORAN, KATHRYN C., M.A., O.T.R. (Texas Woman's University), Associate Professor, Occupational Therapy
MYERS, SUSAN J., M.S. (Florida State University), Instructor, Dietetics and Nutrition
ORTIZ-MORALES, MARIA B., M.A., M.P.H. (University of Pittsburgh), Associate Professor, Health Science
PENDERGRASS, VIRGINIA E., Ph.D. (Ohio University), Assistant Professor, Social Work
QUERALT, MAGALY, M.S., Ed.S. (Barry College), Associate Professor, Social Work
SALAS, LUIS, J.D. (Wake Forest University School of Law), Assistant Professor, Criminal Justice
SHELTON, DAVID S., P.T., M.P.H. (University of North Carolina), Assistant Professor, Physical Therapy
SKOVLY, ROGER C., R.P.T., M.A. (University of Iowa), Associate Professor and Acting Chairperson, Physical Therapy
SMITH, BETSY A., Ph.D. (State University of New York at Buffalo), Associate Professor, Social Work
SMITH, SYLVIA A., M. (A.S.C.P.), M.S. (University of Miami), Assistant Professor, Medical Technology
SNOW, ROBERT E., J.D. (Florida State College of Law), Associate Professor, Criminal Justice
SOLOMON, JULIA A., M.S.W., A.C.S.W., C.S.W. (Tulane University), Assistant Professor, Social Work
STEINHAUER, JAMES, M.P.A. (University of Florida), Assistant Professor, Criminal Justice
THARPE, LULA K., R.N., M.A. (Teachers College, Columbia University), Assistant Professor, Nursing
THOMAS, JANICE T., R.N., M.N. (University of Florida), Assistant Professor, Nursing
TUCKFIELD, JACK, M.Ed. (Florida Atlantic University), Assistant Professor, Criminal Justice
WAID, MARGARET E., M.T. (A.S.C.P.), M.D. (University of Michigan), Chairperson and Associate Professor, Medical Technology
WATSON, ROSE T., M.A. (Columbia University), Coordinator of Academic Advisement and Counseling
WEINER, BETH R., M.A., O.T.R. (University of South Florida), Assistant Professor, Occupational Therapy
WHITE, ELIZABETH, R.N., M.N. (University of Florida), Assistant Professor, Nursing
WHITE, VANDON E., Ph.D. (Purdue University), Professor, Health Science
ZINS, JANET L., M.T. (A.S.C.P.), M.S. (University of Cincinnati), Assistant Professor, Medical Technology

**School of Hotel, Food, and Travel Services**

Dean ..... Gerald W. Lattin
Associate Dean, Chairperson of Hotel and Food Service Management ..... Anthony G. Marshall

**Faculty**

ANGELO, ROCCO M., B.S. (Cornell University), Management
BERKOWITZ, LEONARD, B.A. (University of Maine) Assistant Professor, Meat Sciences
BURRITT, MAURICE, Community Professor, Accounting and Information Systems
CONRADE, GEORGE R., M.B.A. (Michigan State University), Assistant Professor, Accounting and Information Systems

DARBY, PERCIVAL, M.S. (Florida International University), Counseling and Placement
DEAN, EDWIN, Community Professor, Union/Management Relations
GRIER, DAVID R., Community Professor, Beverage Management
HAGENMEYER, FRITZ G., M.A. (Cornell University), Assistant Professor, Hotel Engineering
HURST, MICHAEL E., M.A. (Michigan State University), Associate Professor, Hotel and Restaurant Management
HUSE, RICHARD A., M.S. (Niagara University), Assistant Professor, Travel and Tourism.
ILVENTO, CHARLES L., M.B.A., C.P.A. (Cornell University), Assistant Professor, Accounting and Information Systems
LATTIN, GERALD W., Ph.D. (Cornell University), Dean, School of Hotel, Food and Travel Services; Professor, Management
MARSHALL, ANTHONY G., J.D. (Syracuse University), Associate Dean, School of Hotel, Food and Travel Services; Professor, Law and Financing
MARZELLA, DENNIS A., M.B.A. (Michigan State University), Assistant Professor, Marketing
MONCARZ, ELISA, B.B.A., C.P.A. (Bernard/Baruch College, City U. of New York), Assistant Professor, Accounting and Information Systems
MORGAN, WILLIAM J., Jr., Ph.D. (Cornell University), Professor, Hotel and Restaurant Management
PERRY, GREGORY H., B.S. (Florida International University), Assistant Professor, Food Management
PRENTISS, BONNY R., R.D., M.S. (Purdue University), Assistant Professor, Food Management
RINGSTROM, NORMAN H., Ph.D. (State University of Iowa), Professor, Hotel Management
SHEFFMAN, ABRAHAM, LL.B. (Dalhousie University, Halifax, N.S.), Assistant Professor, Finance and Real Estate
WEBSTER, RICHARD S., Ph.D. (University of Michigan), Assistant Professor, Accounting and Information Systems

**School of Technology**

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Directors:
Division of Construction ..... Oktay Ural
Division of Engineering & Industrial Technology ..... James R. Story
Division of Environmental Technology & Urban Systems ..... Daniel F. Jackson

**Faculty**

AURIOLES, GABRIEL G., M.S. (Florida Atlantic University), Lecturer, Industrial Technology
AZAN, ALFREDO H., M.B.A. (Fairleigh Dickinson University), C.P.A., Instructor, Industrial Technology
BARKER, DAVID R., Ph.D. (University of Hawaii), Associate Professor, Environmental Engineering Technology
CAMPBELL, S. DUKE, Ph.D. (University of Michigan), Assistant professor, Environmental Technology
CEREIJO, MANUEL R., M.S. (Georgia Institute of Technology), Assistant Professor, Electrical Engineering Technology
CHAUDHARI, BHASKAR S., Ph.D. (University of Pennsylvania), Associate Professor, Construction
CLARK, JACK, Ph.D. (Laurence University), Professor, Construction Management
COUCH, JAMES E., M.S. (Florida State University), Assistant Professor, Industrial Technology
DeGROOT, SYBIL, Ph.D. (Ohio State University), Associate Professor, Industrial Technology
EKPO, UDO U., B.S.E.E. (Howard University), Instructor, Engineering Technology
ELLIS, ROBERT W., Ph.D. (Virginia Polytechnic Institute), P.E., Dean and Professor, School of Technology

FAIRBANKS, JESSE R., Ph.D. (Ohio State University), Assistant Professor, Industrial Technology
GONEN, TURAN, Ph.D. (Iowa State University), Assistant Professor, Engineering Technology
HAHS, JIMMY DEAN, Ph.D. (University of Oklahoma), Assistant Professor, Construction
HOUT-COOPER, NEIL, M.Ed. (Florida Atlantic University), Instructor, Industrial Technology
JACKSON, DANIEL F., Ph.D. (State University of New York), Director and Professor, Environmental Technology and Urban Systems
JUDGE, ROBERT M., Ph.D. (University of Arizona), Assistant Professor, Urban Systems Technology
KLECKA, BRETT, M.S. (Czechoslovak Institute of Technology), Assistant Professor, Urban Systems Technology
LEONARD, RENE J., Ph.D. (University of Miami), Assistant Professor, Engineering Technology
LLEVADA, EVODIO, Ph.D. (University of Miami), Instructor, Industrial Technology
MAJZUB, IRAJ E., Ph.D. (University of Torino), Associate Professor, Construction
MENDELL, JAY S., Ph.D. (Rensselaer Polytechnic Institute), Associate Professor, School of Technology
OGLE, FLORENCE, M.S. (Indiana State University), Assistant Professor, Industrial Technology
OTAZO, JULIO O., Master of Architecture (University of Florida), A.I.A., Assistant Professor, Construction
PIERCE, GERARD J., M.A. (California State College), Assistant Professor, Construction
SMITH, ADELE, M.S. (Auburn University), Assistant Professor, Industrial Technology
STORY, JAMES R., Ph.D. (University of Alabama), Director and Associate Professor, Engineering and Industrial Technology
THOMAS, WALTER E., Ph.D. (Indiana Northern University), Associate Dean and Professor, School of Technology
THOMPSON, LeROY E., Ph.D. (Rice University), P.E., Associate Professor, Construction
URAL, OKTAY, Ph.D. (North Carolina State University), P.E., Director and Professor, Construction
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Information Specialist ..... Julio Zangroniz
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Associate Registrar ..... Judy M. Merritt
Assistant Director, University Computing ..... Vacant
Assistant Director, University Libraries ..... Teddy Kassner
Collection Development Librarian ..... V. Leslie Ming

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ALLARD, DAVID P., B.A. (Ohio University) Physical Planning Consultant, Physical Planning
ALMAZAN, SEBASTIAN P., B. ARCH. (Virginia Polytechnic Institute & State University), Architectural Consultant, Physical Planning
ANDERSON, MARIE W., B.A. (Duke University), Assistant to the Vice President, Community Affairs
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ARROWSMITH, RONALD G., BSBA (University of Florida), Associate Vice President, Administrative Affairs
ASHLEY, DONN L., P.E., M.A. International Affairs (The George Washington University), Director of Physical Plant.
BADALOW, VASKIN, M.S. (Eastern Michigan University), Coordinator, Department of Development, Community Affairs
BALDYGA, CAROLANN W., M.A. (Trinity College, Conn.); M.Ed. (University of Massachusetts, Amherst), Assistant Director, Off-Campus Credit Courses, Community Affairs
BALE, PATRICIA J., B.S. (Florida State University), Women's Tennis Coach, Athletics
BARKER, CAROLINE J., M.S.L.S. (University of Illinois), Serials Librarian, Library
BLUKER, JUDITH A., Ph.D. (Florida State University), Women's Volleyball and Softball Coach
BRESLIN, THOMAS, B.A. (University of South Florida), Controller, Administrative Affairs
BROSCH, SHIRLEY A., M.S.L.S. (University of Illinois), Assistant Serials Librarian, Library
BRUSHA, DON R., J.D. (Beverly College of Law) Associate Dean, Division of Student Services
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BUTLER, RONALD C., M.Ed. (University of North Carolina at Chapel Hill) Director of Academic Operations and University Registrar, Academic Affairs
BYRD, MILTON B., Ph.D. (University of Wisconsin), Provost, FIU at North Miami
CAMPBELL, S. DUKE, Ph.D. (University of Michigan), Director of Planning, FIU at North Miami
CLARK, SANDRA J., Ed.D. (University of California at Los Angeles) Dean, Division of Student Services
COLLINS, THOMAS H., Ph.D. (University of Nebraska), Director, Department of Conferences and Short Courses, Community Affairs

COOK, DONALD F., M.S. (University of Miami), Budget Coordinator, Administrative Affairs
COOK, RYCHARD S. II, M.L.S. (University of Denver), Assistant Reference Librarian, Library
CORDELL, HOWARD W., M.S.L.S. (University of Illinois), Director of Libraries, Library
DAGRAEDT, MARY V., M.S. (Illinois State University at Normal), Women's Golf Coach, Athletics
DIVITA, CHARLES JR., Ph.D., (Florida State University), Acting Dean, Continuing Education and Special Programs, Community Affairs
DOLAN, THOMAS J., B.S. (FIU) Systems Coordinator, Serdac
D'OLIVEIRA, DANIEL P., M.S. (Columbia), Director University Physical Planning
DUNBAR, H. MINNIE, M.S.L.S. (University of Illinois), Special Collections Librarian, Library
EDMUNDS, ALFRED F., M.A. (University of Pittsburgh), Director Media Division, Academic Affairs
EFRON, MURIEL C., M.S. (Drexel University), Reference Librarian, Library
ELLIS, JUDY R., M.S. (Florida International University), Coordinator, Institute for Labor Research and Studies, Federal Liaison and Labor Affairs
ENEY, DOUG, Systems Programming, Southeast Regional Data Center
ESTADT, RICHARD L., M.Ed. (University of Cincinnati), Coordinator of Career Planning, Placement and Cooperative Education Programs
FISHER, ROBERT C., Ph.D. (University of Kansas), Associate Vice President for Academic Affairs
FLANDERS, H. JUANITA, Ph.D. (Bowling Green State University), Acquisitions Librarian, Library
FOLSOM, ROBERT G., B.S. (Florida State University), Director, Information Services, University Relations and Development
FORNAGUERA, ANDY, B.B.A. (University of Miami), Director of Internal Control
GERIA, ANDY, B.S. (University of West Florida), Operations Manager, Computing Services, Administrative Affairs
GOERKE, GLENN A., Ph.D., (Michigan State University), Vice President, Community Affairs
GONZALEZ, ESTHER B., M.L.S. (Kansas State Teachers College), Gift and Exchange Librarian, Library
GOODWIN, NANCY LEE, Ph.D. (University of Illinois), Assistant Vice President for Academic Affairs, and Academic Budget Officer; Director, Institutional Research
GOSLINGA, MARIAN, M.S. (University of California), Associate Catalog Librarian, Library
GRAM, HAROLD A., Ph.D. (Syracuse University) Vice President, Administrative Affairs
GREENBERG, BARRY, Ph.D. (New York University), Assistant Director, Institutional Research
HAMILTON, PHIL, B.A. (Florida International University) Financial Aid Counselor, Division of Student Services
HARRIS, KATHRYN M., M.S.L.S. (University of Illinois), Circulation Librarian, Library
HARTNAGEL, Douglas, M.Ed. (University of Miami), Director of Admission and Community College Relations
HUITEMA JR., SIDNEY J., M.A. (Michigan State University), Head Wrestling Coach, Athletics
HUNSICKER, GERALD H., M.A. (Florida International University), Assistant Director of Athletics, Athletics
JENKINS, WILLIAM A., Ph.D. (University of Illinois), Vice President for Academic Affairs
KARSH, ELLEN S., M.S. (Florida International University) Foreign Student Advisor, Division of Student Services
KASSNER, TEDDY, M.L.S. (Rosary College), Assistant Director of Libraries, FIU at North Miami, Library
KATZ, ERIC S., M.S. (Florida State University), Assistant Vice President and Director of Operations and Budget, Community Affairs
KING, KAREL, M.Ed. (Bowling Green State University) Director of Career Planning and Placement Department, Division of Student Services

KEDRIERSKI, JERRY, Director of Campus Safety
KOBASKY, MICHAEL G., Ph.D. (Florida State University), Coordinator, Department of Conferences and Short Courses, Community Affairs
KONKEL, RICHARD H., Ph.D. (Bowling Green University), Interim Vice Provost, FIU at North Miami
KOPENHAVER, LILLIAN LODGE, M.A. (University of Wisconsin-Madison), Coordinator of Student Activities, Student Services
KURTZ, LEONARD F., B.A. (Maryville College), Head Trainer, Athletics
LIEBMAN, DAVID, M.H.A. (Virginia Commonwealth University), Coordinator, State University System External Degree Program, Community Affairs
MAINGOT, ANTHONY P., Ph.D. (Florida State University), Acting Dean, International Affairs Center
MARCUS, EILEEN, B.S. (University of Florida), Director of Publications, Community Affairs
MARENGELLA, MARK, M.A. (Boston University), Assistant Director, Admissions and Community College Relations
MARTIN, OLGA CRISTINA, M.S. (St. John's University) Career Counselor, Career Planning & Placement
MERRITT, JUDY M., Ph.D. (University of Alabama), Associate Registrar, FIU at North Miami
MING, LESLIE, M.A.L.S. (Florida State University), Collection Development Librarian, FIU at North Miami, Library
NUTTALL, WILLIAM W., M.S. (Florida International University) Head Soccer Coach — Coordinator of Recreational Sports, Department of Intercollegiate Athletics
OLSON, EMMA E., Financial Aid Counselor, Financial Aid, Student Services
ORTEGA, BLANCA R., B.B.A. (University of Miami) Budget Analyst, Office of the Budget Coordinator
PAGANO, JULES O., M.P.A. (Nova University), Dean, Office of Federal Liaison & Labor Affairs, Community Affairs
PARK, DABNEY G., JR., Ph.D. (Tulane University), Director, State University System External Degree Program, Community Affairs
PARKER, JOHN H., Ph.D. (University of California/Berkeley), Assistant Director, FAU-FIU Joint Center for Environmental and Urban Problems, Community Affairs
PECK, GEORGE S., JR., B.S. (University of Miami), Director, Development, University Relations and Development
PEELER, ELIZABETH H., M.S.L.S. (Columbia University), International Affairs Librarian, Library
RADENCICH, JOHN R., A.M.L.S. (University of Michigan), Assistant Catalog Librarian, Library
RAYMOND, DONALD L., B.B.A.(Northwestern University), Director, University Personnel Relations, Personnel Services
REMINGTON, JOHN, Ph.D. (University of Michigan), Director, Institute for Labor Research and Studies, Community Affairs
RILEY, THOMAS D., M.A. (Indiana University of Pennsylvania), Assistant Coordinator of Student Activities, Student Services
RITCHEY, OZZIE, B.S. (Barry College), Admissions Counsellor
RODRIGUEZ, JOSEFINA H., M.L.S. (Emory University), Documents Librarian, Library
RYAN, B. KEITH, Interim Director, Southeast Regional Data Center
SABBAGH, FRANCES E., B.A. (Florida International University) Assistant Director of Registration and Records
SADOFF, DORIS, B.A. (University of Miami), Director of Purchasing Services, Administrative Affairs
SHARPE, BETTY J., B.A. (Florida International University), Coordinator, Department of Conferences and Short Courses, Continuing Education and Special Programs
SHAVE, ROBERT J., M.A. (Florida International University), Head Golf Coach, Athletics
SHEARN, REGINA, Ph.D. (University of Florida), Coordinator, State University System External Degree Program, Community Affairs
SKELLINGS, EDMUND G., Ph.D. (University of Iowa), Director, International Institute for Creative Communication, Continuing Education and Special Programs, Community Affairs

SLAYTON, WAYLAND F., B.S. (West Virginia Institute of Technology) Safety Coordinator, Administrative Affairs
SPENCE, TERRY L., M.B.A. (Kent State University), Dean, University Relations and Development, Community Affairs
SPENCER, DOUGLAS, Ph.D. (The University of Michigan), Director, Off-Campus Credit Courses, Community Affairs
SPIVA, ULYSSES VAN, Ph.D. (Stanford University), Director, Division of Sponsored Research and Training
STACK, ROBERT E., Ph.D. (St. Louis University), Assistant Catalog Librarian, Library
SUMNER, JACK A., Ph.D. (Kansas State University), Coordinator, Department of Conferences and Short Courses, Continuing Education and Special Programs
TAGGART, WILLIAM, Ph.D. (University of Pennsylvania), Interim Director, Florida International University Computing Services
TATRO, CHARLOTTE R., Ph.D. (University of Georgia/Athens), Director, Institute for Women, Community Affairs
THOMAS, FRANCENA, M.Ed. (University of Miami) Director, Minority Affairs and Women's Concerns
TRIPP, MARGARET S., M.S.L.S. (Emory University), Associate Reference Librarian, Library
USCIER, SUSAN C., B.S. (Florida International University), Women's Basketball Coach, Athletics
VOLCANSEK, MAX J., Ph.D. (Texas Tech University), Interim Director, Veterans Programs and Services, Division of Student Services
WARD, CARMEN C., M.A. (Middlebury College), Coordinator, FAU-FIU Joint Center for Environmental and Urban Problems
WETTERSTRAND, BILL, Ph.D. (University of Wisconsin), Instruction and Research Coordinator, Computing Services, Administrative Affairs
WILSON, DAVID L., Ed.D. (Boston University), Associate Director, Media Center, Academic Affairs
WINSLOW, LIBIA P., B.F.A. (Florida Atlantic University), Coordinator, Department of Conferences and Short Courses, Continuing Education and Special Programs, Community Affairs
WONDERLING, THOMAS H., Ed.S. (Bowling Green State University), Director, Athletics
WOODS, JULIA A., M.L.S. (University of Oklahoma), Assistant Director of Libraries, Tamiami Campus, Library
WYLIE, NANCY, B.S.W. (Florida International University), Coordinator, Department of Conferences and Short Courses, Continuing Education and Special Programs
YOUNKIN, WILLIAM F., M.Ed. (University of Miami), Director of Registration and Records
ZELDMAN, DIANN, M.Ed. (University of Miami) Articulation Officer, Admissions and Community College Relations
ZELMAN, JACQUELINE M., M.S. (Simmons College), Assistant Catalog Librarian, Library

## Area Map


I-95
163rd ST.
FIU NO. MIAMI CAMPUS
U.S. 27
PALMETTO X-WAY
27th AVE.
NORTH-SOUTH X-WAY
U.S. 1
WEST DADE X-WAY
E-W X-WAY (extension)
AIRPORT X-WAY
TAMIAMI TRAIL
EAST-WEST X-WAY
FIU TAMIAMI CAMPUS
107th AVE.
BIRD RD.
SOUTH DADE X-WAY
U.S. 1
N. KENDALL DRIVE

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| | |
|---|---|
| January 11 | Last Day to Complete Late Registration<br>Last Day of Official Drop and Add Period<br>Last Day to Drop Courses or Withdraw From University Without Incurring a Financial Liability |
| January 18 | Last Day to Pay Fees Without a $25.00 Late Fee |
| January 26 | Last Day to Apply for Winter Quarter Graduation |
| February 1 | Last Day to Pay Fees to Avoid Cancellation of Enrollment |
| February 22 | Last Day to Reinstate Cancelled Enrollments ($25.00 reinstatement fee) |
| March 2 | Last Day to Drop a Course With a Grade of *DR* |
| March 9 | Last Day to Withdraw From University with *WI* Grade |
| March 18 | Classes End |
| March 22 | All Grades Due in Registration Office by 12:00 Noon |

## SPRING QUARTER, 1977

| | |
|---|---|
| January 14 | Last Day for Receipt of Applications for Foreign Students Applying from out of the Country |
| March 11 | Last Day for Receipt of Applications for Regular Admission to Spring Quarter |
| March 28 | Change Day (Late Registration and Class Schedule Adjustments) |
| March 29 | Classes Begin |
| April 4 | Last Day to Complete Registration<br>Last Day of Official Drop and Add Period<br>Last Day to Drop Courses or Withdraw From University Without Incurring a Financial Liability |
| April 11 | Last Day to Pay Fees Without a $25.00 Late Fee |
| April 18 | Last Day to Apply for Spring Quarter Graduation |
| April 25 | Last Day to Pay Fees to Avoid Cancellation of Enrollment |
| May 16 | Last Day to Reinstate Cancelled Enrollments ($25.00 reinstatement fee) |
| May 23 | Last Day to Drop a Course With a Grade of *DR* |
| May 30 | Memorial Day Holiday (University Closed) |
| May 31 | Last Day to Withdraw From University with *WI* Grade |
| June 10 | Classes End |
| June 11 | Official Commencement Exercises |
| June 14 | All Grades Due in Registration Office by 12:00 Noon |

## SUMMER QUARTER, 1977

| | |
|---|---|
| March 31 | Last Day for Receipt of Applications for Foreign Students Applying from out of the Country |
| June 3 | Last Day for Receipt of Applications for Regular Admission |
| June 20 | Change Day (Late Registration and Class Schedule Adjustments) |
| June 21 | Classes Begin |
| June 27 | Last Day to Complete Late Registration<br>Last Day of Official Drop and Add Period<br>Last Day to Drop Courses or Withdraw from University Without Incurring a Financial Liability |
| July 4 | Independence Day Holiday (University Closed) |
| July 5 | Last Day to Pay Without a $25.00 Late Fee |
| July 11 | Last Day to Apply for Summer Quarter Graduation |
| July 18 | Last Day to Pay Fees to Avoid Cancellation of Enrollment |
| August 8 | Last Day to Reinstate Cancelled Enrollments ($25.00 Reinstatement Fee) |
| August 15 | Last Day to Drop a Course With a Grade of *DR* |
| August 22 | Last Day to Withdraw From University with *WI* Grade |
| August 26 | Classes End |
| August 30 | All Grades Due in Registration Office by 12:00 Noon |

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